



Office of the Prime Minister

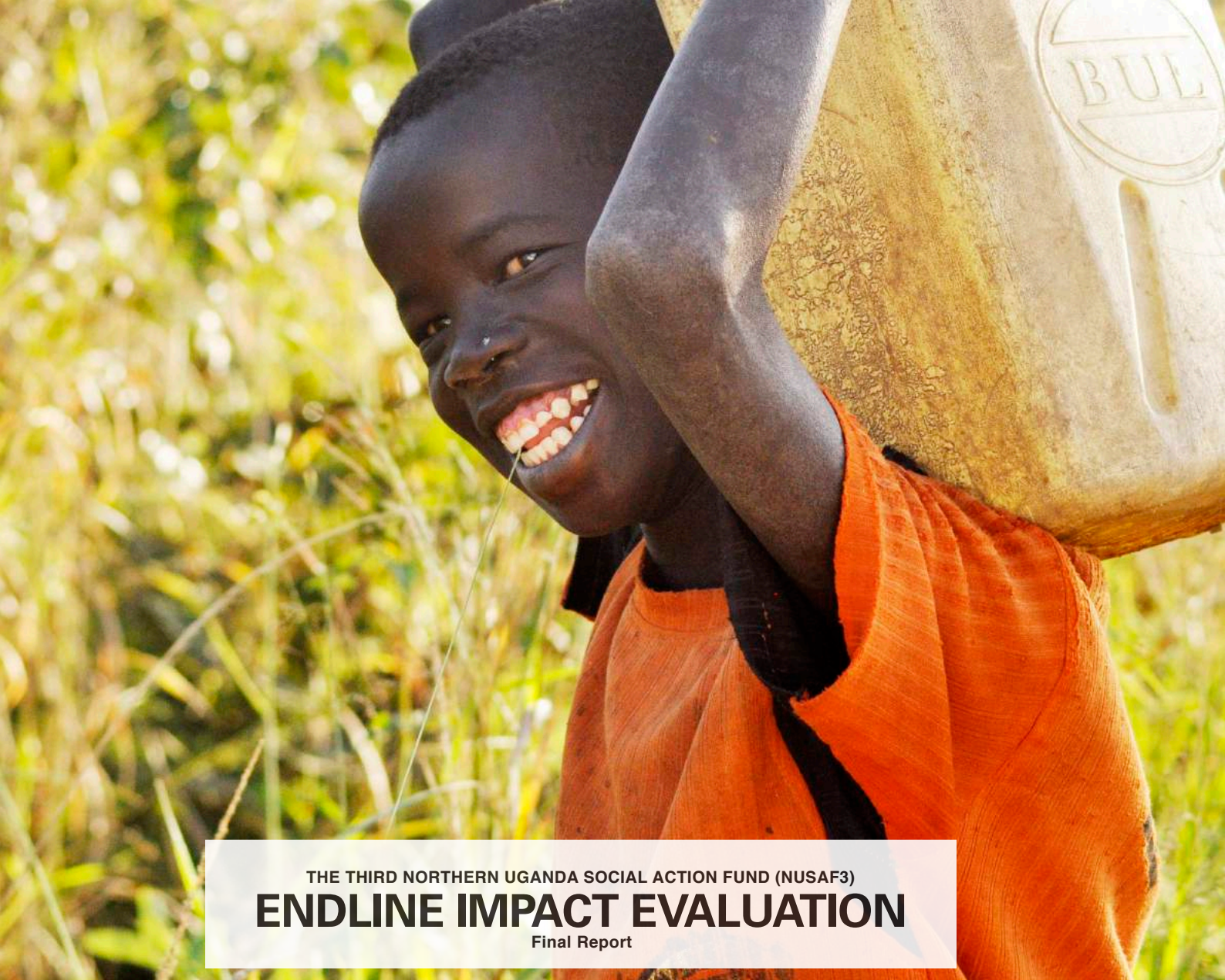
THE THIRD NORTHERN UGANDA SOCIAL ACTION FUND (NUSAF3)
ENDLINE IMPACT EVALUATION
FINAL REPORT



JUNE

20

21



THE THIRD NORTHERN UGANDA SOCIAL ACTION FUND (NUSAF3)
ENDLINE IMPACT EVALUATION
Final Report

Prepared by
Makerere University Business School
Endline Impact Evaluation Report
June 2021
Year of publication: 2021

All rights reserved. No part of this Report may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system without the prior written permission from Office of the Prime Minister.

Table of Contents

ACKNOWLEDGEMENTS	vii
LIST OF ACRONYMS	vii
FOREWORD	ix
EXECUTIVE SUMMARY	x
CHAPTER ONE	1
BACKGROUND	1
1.1 Introduction	1
1.2 NUSAF3 Design and Components	1
1.3 The Project Theory of Change	3
1.4 The Project Design	4
1.5 Achievements of each component	4
1.6 Objectives of the Impact Evaluation	6
1.7 Structure of the Report	7
CHAPTER TWO	7
EVALUATION METHODOLOGY	7
2.1 Evaluation design	8
2.2 Study area and sample selection	8
2.3 Selection of study respondents	10
2.4 Pilot Testing of the Study Tools, Data Collection Formats and Processes	10
2.5 Data collection and field organization	11
2.6 Quality Control Framework	12
2.7 Construction of indices	12
2.8 Econometric methods	14
2.9 Evaluation Challenges	16
CHAPTER THREE	17
NUSAF3 IMPACT ON RESILIENCE	17
3.1 Introduction	18
3.2 Qualitative findings on the Impact of NUSAF3 on households' resilience	18
3.3 Descriptive statistics	20
3.4 Trends in Resilience Capacity of Households	22
3.5 Econometric Results	26
3.1.1 Breusch and Pagan Lagrangian multiplier (LM) test for random effects	27
3.1.2 Model estimation for NUSAF Impact on Household Resilience Capacity Scores	27
Pooled OLS Regression Model	27
CHAPTER FOUR	29
NUSAF3 IMPACTS ON HOUSEHOLD WELFARE AND PROGRESS OUT OF POVERTY	29
4.1 Introduction	30
4.2 Contribution to household assets	30
4.3 Results on Household welfare from the qualitative study	31
4.4 Descriptive statistics	33
4.5 Trends in Household Welfare	33
4.6 Econometric results	35
4.7 Progress out of poverty	36
CHAPTER FIVE	41
IMPACT ON ACCESS TO AND USE OF COMMUNITY INFRASTRUCTURE	41
5.1 Introduction	42

5.2	Qualitative Findings	42
5.3	Trends in Access to community services	43
CHAPTER SIX		45
IMPACT ON INCOMES, LIVELIHOODS AND SAVINGS		45
6.1	Introduction	46
6.2	Qualitative Results	46
6.3	Descriptive Statistics	48
6.4	Econometric Results	50
CHAPTER SEVEN		55
IMPACT ON ENTERPRISE DEVELOPMENT AND BUSINESS GROWTH		55
7.1	Introduction	56
7.2	Qualitative Results	56
7.3	Changes in household enterprise engagement by wave of evaluation	56
7.4	Econometric Results	59
CHAPTER EIGHT		61
HOUSEHOLD FOOD SECURITY AND CONSUMPTION		61
8.1	Introduction	62
8.2	Qualitative Results	62
8.3	Descriptive statistics	62
8.4	Econometric Results	72
CHAPTER NINE		75
IMPACT ON SOCIAL CAPITAL, INCLUSION AND WOMEN EMPOWERMENT		75
9.1	Introduction	76
9.2	Impact on Social capital development and social harmony	76
9.3	Contribution to women empowerment	79
9.4	Contribution to Financial inclusion	82
9.5	Attitudinal change to work, investment and productivity	82
CHAPTER TEN		83
ENVIRONMENTAL MANAGEMENT, STAKEHOLDER SATISFACTION AND IMPACT ON SDGS		83
10.1	Introduction	84
10.2	Environment and Natural Resource Management practices	84
10.3	NUSAF3 Contribution to the Sustainable Development Goals (SDGs)	87
10.4	Stakeholder satisfaction with NUSAF3	88
CHAPTER ELEVEN		91
CONTRIBUTION OF STAAC TO NUSAF3 PERFORMANCE		91
11.1	Introduction	92
11.2	STAAC main outcomes and intermediary outcome	92
CHAPTER TWELVE		103
CONCLUSIONS, INNOVATIONS AND RECOMMENDATIONS		103
12.1	Conclusions	104
12.2	Innovation and Lessons Learned	106
12.3	Recommendations	110
12.3.1	Sustainability of project outcomes	110
12.3.2	Policy Recommendations	110



List of Tables

Table 1:	Summary of NUSAF3 Achievements	5
Table 2:	Sample Size	9
Table 3:	Food Groups and Weights	13
Table 4:	Access to Basic Social services	21
Table 5:	Social safety nets and adaptive capacity	22
Table 6:	Household Resilience Capacity of NUSAF3 beneficiaries by Region	24
Table 7:	Hausman Test for model appropriateness	26
Table 8:	Breusch and Pagan Lagrangian Multiplier test for Random Effects results	26
Table 9:	Detection of heteroscedasticity problem	26
Table 10:	Estimation for NUSAF Impact on Household Resilience Capacity Scores Using Pooled OLS Regression Model	27
Table 11:	Trends in ownership of household assets	33
Table 12:	Household Welfare by component	35
Table 13:	Estimation of NUSAF3 Impact on Household Welfare Using Fixed Effects Model	36
Table 14:	Descriptive statistics for indicators of poverty measured by PPI	37
Table 15:	Poverty Progression Index by Wave of Evaluation	38
Table 16:	Household Poverty Progression by Wave of Evaluation and Sub-region	39
Table 17:	Estimation of NUSAF3 Impact on Poverty progression	39
Table 18:	Sources market for beneficiary household produce	44
Table 19:	Posthoc analysis of the changes in household monthly income	50
Table 20:	Model estimation for NUSAF Impact on Household Incomes Using Fixed Effects (within) Regression	51
Table 21:	Trends in Household and individual beneficiary Savings	52
Table 22:	Savings-Income Regression Model Results	52
Table 23:	Correlations Matrix	53
Table 24:	Rate of return on investment from selected activities, IHISP	54
Table 25:	Sources of livelihood for NUSAF3 beneficiaries	57
Table 26:	Entrepreneur's perception of performance of business enterprise	58
Table 27:	Estimation for NUSAF Impact on Household Enterprise growth Using Random Effects GLS Regression	60
Table 28:	Quantity of Food produced and Sold in the immediate past season	63
Table 29:	Food consumption scores by component and wave of evaluation	66
Table 30:	Dietary Diversity by region and Wave of project evaluation	67
Table 31:	Consumption Score Index and Components	69
Table 32:	Food Security measured by the coping strategy index per region	70
Table 33:	Expenditures Priorities (access)	72
Table 34:	Model estimation for NUSAF Impact on Household Food Consumption Using Fixed Effects (within) Regression	73
Table 35:	Household's social capital by wave of evaluation	77
Table 36:	Causes of conflict at household level before and after NUSAF intervention	79
Table 37:	Level of women empowerment	81
Table 38:	Summary table showing experience of corruption	93
Table 39:	Summary table showing availability of project guiding documents	95
Table 40:	Availability of project accountability mechanisms	96
Table 41:	Beneficiaries' knowledge of sub project finances	97
Table 42:	Value for money assessment of NUSAF3 projects	97
Table 43:	Records and filing sub project documents	98
Table 44:	Appendix 1: Lookup Table for Progress out of poverty computation	113

List of Figures

Figure 1: NUSAF3 Project Theory of Change	3
Figure 2: Trends in Resilience Capacity across the evaluation waves	22
Figure 3: Resilience levels by Project Sub-component	23
Figure 4: Mean Household Resilience Score by Gender	25
Figure 5: Household welfare by wave	34
Figure 6: Mean distance before and after NUSAF intervention	43
Figure 7: Main Livelihood Sources for NUSAF3 Beneficiaries	49
Figure 8: Changes in household monthly income	49
Figure 9: Changes in household head's individual monthly income	50
Figure 10: Changes in Amounts of Money saved by Beneficiary Households	53
Figure 11: Comparison of household enterprise engagements by wave of evaluation	58
Figure 12: Enterprise revenue growth by Education	59
Figure 13: Number of Meals Eaten in a day	64
Figure 14: Dietary diversity for NUSAF3 beneficiaries 7 days before the surveys	65
Figure 15: Dietary diversity by wave	65
Figure 16: Changes in household level of conflict	78
Figure 17: Level of social harmony among beneficiaries in NUSAF Sub-components	78
Figure 18: The dominant goal for saving by women (1087 women)	81
Figure 19: Actors Involved in handling grievances registered with CMGs	94
Figure 20: STAAC contribution to household income	99

Acknowledgements

Makerere University Business School (MUBS) executed the project evaluation under a memorandum of understanding with the Office of the Prime Minister to conduct the Third Northern Uganda Social Action Fund (NUSAF3) impact assessment studies. The evaluation team would like to acknowledge the following for making the evaluation exercise successful. The MUBS technical and report writing team included Prof. Musa Moya, Dr. Celestine Katongole, Dr. Enock Twinoburyo, Ms. Susan Mwebaza, Ms. Robinah Akodo, Mr. Mohamed Kiggundu and Mr. James Kibanga.

The evaluation team is grateful to the technical and administrative team at NUSAF3 for fully supporting execution of the assignment. Special thanks to the NUSAF3 Director Dr. Robert Lim Lim, Mr. Herbert Akampwera, Monitoring and Evaluation Specialist, Mr. Michael Oturu, monitoring and evaluation officer and the Senior Management at Office of the Prime Minister for the great leadership and support that enabled the team to successfully execute this assignment.

The evaluation team would also like to acknowledge the Monitoring and Evaluation team at the Office of the Prime Minister and the Evaluation Steering Committee for the technical backstopping, guidance and regular support throughout the evaluation process. The team is also grateful to the district NUSAF3 desk officers, community facilitators, the Chief Administrative Officers and all the resource persons who made it possible to track the beneficiaries and enable the impact evaluation to take place.

Finally, Makerere University Business School is grateful to the Office of the Prime Minister for the opportunity to participate in NUSAF3 Programme through the evaluation studies. In a special way, MUBS would like to thank the Prime Minister, the Permanent Secretary, and the entire team at OPM for taking the initiative to have the Business School involved in Government programmes through research. MUBS cherishes this relationship as it is also important to the furtherance of scholarly investigation, improvement of teaching, and provision of reliable information for decision making on matters of national development.

List of Acronyms

CAO	Chief Administrative Officer
CDO	Community Development Officer
CFs	Community Facilitators
CIG	Community Interest Group
CPCs	Community Procurement Committees
CPMC	Community Project Management Committee
CWC	Community Watershed Committee
DEO	District Environment Officer
DIST	District Implementation Support Team
DRF	Disaster Risk Financing
FCS	Food Consumption Score
FGDs	Focus Group Discussions
HH	Household
IG	Inspectorate Of Government
IHISP	Improved Household Income Support Program
LC	Local Council
LIPW	Labor Intensive Public Works
LLA	Lead Local Artisan
MUBS	Makerere University Business School
NDO	NUSAF3 Desk Officer
NUSAF3	Third Northern Uganda Social Action Fund
OPM	Office Of The Prime Minister
PPI	Progress out of Poverty Index
RDC	Resident District Commissioner
SACCO	Savings And Credit Cooperative Organization
SLP	Sustainable Livelihood Pilot
STAAC	Strengthening Transparency, Accountability And Anti-Corruption
TST	Technical Support Team
VSLAs	Village Saving and Loans Associations

The Government of Uganda is committed to the social-economic transformation of the people of northern Uganda. For a long time, this region suffered from political instability which created widespread poverty and underdevelopment. People lost livelihoods, making them vulnerable to natural, economic and social shocks. Government launched the third Northern Uganda Social Action Fund (NUSAF3) programme in 2016 to provide effective income support to and build the resilience of poor and vulnerable households in Northern Uganda. At the time, the region was home to 74% of Uganda's poorest people (5.9 million poor people). NUSAF3 targeted to reach out to at least half of these and establish a comprehensive safety net for them.

For the first time NUSAF3 engaged the poorest of the poor people of northern Uganda through giving temporary work opportunities on public works. The programme further provided them with grants to promote income generating activities. Engagement through public works and business enterprises allowed these poor and vulnerable people to earn income. We made deliberate efforts to ensure that the earned income was put to good use through consumption, savings, investment in business and social services such as education and health.

I am happy that the target beneficiaries decided on which interventions they needed in their communities, and were part of the

implementing teams. Over the course of the last five years, we have been able to support 2,995,500 vulnerable households with 3429 community assets, and paying for over 25.6millionworkdays. In total,NUSAF3has funded up to 11,629 subprojects with 70.5% of these being household income generating activities.

We have seen improved food production and consumption, a buzzing culture of savings, growth in community and individual entrepreneurship, and general improvement in resilience of the poor to community and household shocks. We have successfully tested models of timely response to drought disasters and local community mobilization of capital. I have no doubt that a number of the beneficiaries are on a positive trajectory out of extreme poverty.

I would like to thank the World Bank and the Government of Uganda for the financial and technical support of Nusaf3. Special thanks to my Technical Support Team (TST), and the teams in the 67 districts where we implemented the project. I fully appreciate your tireless efforts in successfully implementing NUSAF3. I would like to appreciate the contribution of Makerere University Business School towards the evaluation of the project performance from the beginning to the very end.

Dr. Robert Lim Lim,
Director
The Third Northern Uganda Social Action Fund

/ Executive Summary

About NUSAF3

Introduction

This report provides an assessment of the impact of the **Third Northern Uganda Social Action Fund (NUSAF3)** on the beneficiary households as well as their communities as a whole. NUSAF3 was a five-year project implemented from 2016 to 2021 in 67 districts of northern Uganda by the Office of the Prime Minister. The assessment was conducted from December 2020 to February 2021 by Makerere University Business School (MUBS). The methodology used was both quantitative and qualitative, engaging project stakeholders at TST, district and community level. **The development objective of NUSAF3 was to provide effective income support to and build the resilience of poor and vulnerable households in Northern Uganda.** The project sought to establish a comprehensive safety net for vulnerable groups by creating temporary work opportunities through public works, providing grants to promote income generating activities, and improving organization and monitoring mechanisms to promote transparency, accountability, coordination, and program management.

Project beneficiaries

In 2016/17 Uganda had 8 million people living in abject poverty of which 89% lived in rural areas. Of these, 5.9million lived in eastern and northern Uganda. **NUSAF3 supported 2.9million (or half of the poor people in northern and eastern Uganda).** These subregions were Bukedi, Elgon, Teso, Karamoja, Lango, Acholi, West Nile and Bunyoro. Among all the beneficiaries supported, 55% were female.

NUSAF3 project components and subcomponents

NUSAF3 implemented three major project components. LIPW sub-component was designed to offer the poorest of the poor households 54 days of work on public works projects. Workers were compensated with wages of UGX 5500 per day, generating

a maximum of UGX297,000. The main objectives of LIPW were to (1) provide short-term employment to improve food security and consumption smoothening during the lean season, and (2) create infrastructure assets to mitigate the impacts of environmental degradation and improve access to markets and services. In Karamoja, LIPW was scaled up to rapidly provide additional support in times of drought. This was called disaster risk financing (DRF) and was triggered thrice to prevent household consumption from dropping after drought and to protect people's livelihoods and assets. LIPW and DRF financed wages, equipment, materials, and administrative costs. In total over 25.6million-person workdays were created and paid for by the project. The project further built 3459 community assets including Roads, Forestry, Environment, nursery beds and water sources.

The Livelihood Investment Support (LIS) component aimed to extend livelihood support to active households and, by doing so, increase their productive assets and incomes. The LIS component was comprised of IHISP and SLP. The IHISP sub-component was designed to provide skills development training, livelihood grants, and mentoring support to 100,100 households. IHISP facilitated group creation (of 10 to 15 households) who were given grants of up to USD \$5,000 to support existing and new market driven enterprises.

SLP sub-component sought to support household livelihood investments focusing on self-help groups with beneficiaries accessing a village revolving fund (VRF) rather than receiving grants. SLP tested an approach to livelihood support that was expected to foster stronger community institutions through building strong village level community institutions of the poor and providing business management support services to existing and new community interest groups (CIGs). The pilot focused on universal coverage of the poor in the target villages while tapping on already existing affinity poor community savings groups and mobilizing and supporting other poor households to form savings groups of their own.

Project implementation approach

NUSAF3 implementation took a watershed approach to encourage systematic and sustainable natural resource management and development targeting households with similar characteristics and natural resource challenges.

The project took a bottom-up approach or Community Driven Development, allowing beneficiaries to decide on their needs and interventions to address the identified needs. With the support of the district local governments and the NUSAF3 technical support team, the communities created project management structures to mobilise, coordinate, and manage subprojects within their communities. In these community leadership structures the poor women actively got representation through affirmative action. The community structures received technical guidance and support from subcounty implementation support teams, district implementation support teams and several technical offices at the district level. Whether the subprojects were under LIPW or under LIS, beneficiaries decided on what they wanted and that is what was funded, after technical evaluation by the relevant technical staff at the districts.

Impact Evaluation Approach

The endline impact evaluation was conducted by Makerere University Business School from December 2020 to March 2021. The evaluation used both qualitative and quantitative methods tracking the same cohort of beneficiary households that participated in the baseline and midline surveys. These households were selected scientifically and allocated to the 8 regions and 26 districts proportionately. Overall, the impact evaluation reached a sample of 4198 respondents, representing 77% response rate. The attrition rate from baseline and midline evaluations averaged 23%.

The evaluation study used a non-experimental design to estimate the project impacts on the targeted beneficiaries. At baseline, the study targeted both beneficiaries and non-beneficiaries but when the midline evaluation was conducted, even beneficiaries originally considered non-beneficiaries had participated in the project. This was primarily because of the fact that the local leaders (both technical and political at the

district level) considered it unethical to support some households and leave the others when all of them suffered from poverty and vulnerability. This unethical question about experimental designs has also been raised in literature. The targeting mechanism of the project considered the poorest of the poor and the active poor. Inherent in this mechanism was the selection bias which would make RCT difficult. Therefore, the evaluation team chose to use a quasi-experimental approach to trace changes in beneficiary households. Panel data has extensive use in impact evaluations and it is deemed fit for treatment exclusive grouped data like NUSAF data. By blending the inter-individual differences and intra-individual dynamics panel data usually contain more degrees of freedom and less multicollinearity, hence improving the efficiency of econometric estimates. Panel data accounts for all time observations (allows for all waves) – unlike pre- and post-treatment outcome measures, and allows for isolating the effects of treatment from other factors affecting the outcome.

In order to establish the impact of NUSAF3, a single difference observed changed Pre-Post Approach was adopted as well as multi variate Panel data analysis to examine the relationships between a dependent variable (Impact dependent variables) and explanatory variables (including project components as dummies). The observed changes through NUSAF intervention were captured by tests of significance by comparing project beneficiaries' situation before (baseline) and after the intervention (Endline). A panel model equation (1) was estimated for the impact of individual household and community characteristics (), individual household changes and NUSAF project components () on outcome (Household resilience capacity, Poverty Progression, Household wealth, Household incomes, Business enterprise development and food security).

Triangulation was done using qualitative data that was collected from the same cohort of respondents for the three evaluation waves. The data was collected at five levels: technical support team; districts; sub-counties; community project management structures and beneficiaries. These were engaged through strategic interviews, key informant interventions, focus group discussions, and in-depth interviews, taking into account political representation, technical involvement and participation, administrative involvement, gender, youth and special interest groups. A total

of 369 qualitative interviews were conducted and electronically recorded. All of these helped to triangulate the quantitative information.

Impact of NUSAF3 on beneficiaries

NUSAF3 improved household resilience and reduced their vulnerability to shocks

NUSAF3 significantly reduced vulnerability from 65% to 53% while improving resilience from 35% to 47% ($t=2.6235$, $p<.05$). Improvement in household resilience was reflective of positive increase in access to basic Social Services; ownership of productive assets; improved social safety nets; and adaptive capacity of the beneficiary households. The major drivers of these indicators of resilience were household wealth improvement, food consumption and household enterprise growth. These three drivers accounted for up to 30% of household resilience. **Beneficiaries demonstrated improved capacity to manage risks as they formed groups and started productive enterprises using incomes from NUSAF3.** They learnt how to save, manage business and were able to pay debts. They used both their savings and earnings to buy livestock especially goats, poultry, sheep, pigs, and cows among others. They further bought seeds and grew more food for both domestic consumption and sale.

NUSAF3 improved Household welfare and spurred progress out of poverty

Beneficiary household welfare significantly improved with those considered poor falling from 52.7% at baseline to 20.2% at endline, and those considered average (neither rich nor poor) increased from 45.7% to 71.2% ($t=19.629$, $p<.05$). Growth in welfare suggests improved household consumption and savings as well as good living conditions. This was directly linked to acquisition of both productive and non-productive assets at household level. Household commercialization, poverty progression, household size, and resilience accounted for up to 22.8% of the improvement in household welfare. NUSAF3 supported more beneficiaries from households that were bigger in size, and thus these households had a higher chance of improving their welfare than the small households (below five members). The project

created **employment opportunities which allowed beneficiaries to earn income and make savings which they used to improve household welfare.**

Beneficiaries acquired both productive and non-productive assets which they used to improve feeding, clothing, medication, education and housing conditions. They bought household assets, constructed drying racks and pit latrines leading to better welfare, hygiene and sanitation. The project further supported in the growth of human assets, by affording parents to earn money and taking their children to school. Adults were trained in savings management, improved agricultural practices, group dynamics and tree planting.

Using the progress out of poverty index, the proportion of beneficiary households trapped in poverty fell from 63.5% to 45.3%. Significant progression was reported in Acholi, Teso and West Nile where the percentage of poor beneficiaries fell more than half the figures at baseline (from 65.3% to 23.9%, 58.4% to 23.9% and 65.3% to 23.9% respectively). There was modest reduction in poverty in Bunyoro, Karamoja, Lango and Bukedi sub-regions. Overall, the major drivers of household poverty progression were household income, access to community services, food consumption and enterprise development. These drivers accounted for up to 17.2% of the observed improvement in poverty progression. Thus, a focus on building household income, community assets and enterprise development can help households improve their prosperity.

The project increased access to and use of community assets

NUSAF3 built 3429 community assets and eased both access and use. The furthest community asset was a health facility, and this was in less than 3km. In part this was because of construction of access roads. The access roads were used by both the NUSAF3 beneficiaries and non-beneficiaries to access social services like health facilities, schools and markets. These assets boosted trade as they eased movement of traders to remote communities. The farmers were able to take some of their produce to markets where they bargained better prices. Beneficiaries were able to reach health centres more quickly and easily to access medical care when they or the members of their households fell sick.

NUSAF3 significantly improved household incomes and savings

NUSAF3 led to increase in incomes of its beneficiaries by 42.7%. At baseline households earned an average of UGX143,270 and this significantly increased to UGX204,386 at endline (F(2-315026)= 151.863, p<.05). The major drivers of household income were enterprise growth, household commercialization and participation in NUSAF3. These drivers accounted for up to 11.2% of the observed increase in household income. Increase in total revenues from the business enterprises translated into improved incomes at household level. Furthermore, households that were able to sell part of their produce were able to earn higher incomes than those which did not. Qualitative evidence showed that NUSAF3 provided direct employment through public works from which the poor earned income. Others earned income through enterprises whose start up and growth was supported by NUSAF3. The beneficiaries mobilized savings from these incomes as well as other sources for investment and household needs. Beneficiaries utilized borrowed funds from group savings to address family emergencies, buy seeds during the planting seasons and to pay school dues for their children. A number of beneficiaries utilized their group savings to boost expenditure on productive assets, to utilize their land and to start small enterprises. The saving culture has taught people to keep some money which helps them to handle unforeseen emergencies.

Savings at household level increased between baseline and midline before falling slightly at endline. The fall was largely attributed to covid-19 as the measures to contain the pandemic affected people's saving volumes. **More encouraging is that at least 50% of beneficiary households held some savings at endline. Overall, the shares of households in lowest saving group (less than UGX 50,000) decreased while the shares in the highest saving group (above UGX 200,000) increased suggesting that average savings increased over the programme period.** Majority of the beneficiaries also belonged to savings groups, with proportions increasing from 60.6% at baseline to 70% at endline. This means that the idea of creating safety nets for the beneficiaries gained traction and increasingly people found it useful to save in groups. At individual level, within the three months to evaluation it was evident that personal savings in the groups increased significantly

increased from an average of UGX108,796 to UGX140,500 (F(2-3905)= 5.186, p<.05), and at the same time these people borrowed from the groups.

The total cumulative monetary value of savings on IHISP project were Uganda shillings (UGX4.06 billion), translating into 45% which is fairly consistent with marginal propensity to save in a simple regression savings income model estimation. This is much higher than the national saving rate of 19.7%. High rates of return on investment (RoI) values under IHISP were observed, attributed to the low cumulative loan values. Activities with relatively low loan shares of income like livestock trading, SMEs, farming (Ox Traction) and tree planting were associated with high rates of return. Also, households whose savings were above UGX 50,000 were 63.9% more likely to have enterprise revenue growth than those whose savings were less than UGX 50,000 holding other factors constant.

NUSAF3 spurred enterprise development and business growth

At endline nearly half of the beneficiaries derived their livelihoods from subsistence farming (48.8%). This result compares better than the national average of 68% subsistence farming. Thus, while subsistence farming was still high, NUSAF3 beneficiaries had several other sources of livelihood. These sources include casual labor (16%), petty business (10.12%), commercial crop production (6.1%) and informal employment (5.1%). Reliance on these sources of livelihood took a significant upward trajectory since baseline.

One of the biggest achievements of NUSAF3 was emergency and growth and community and individual entrepreneurship among the poor people. Beneficiaries from all components of the project started enterprises. The LIPW beneficiaries used their earnings to start micro and small enterprises. Most of these enterprises were engaged in alcohol brewing, livestock marketing, selling of maize and beans, retail shops, selling soap, cooking oil, salt, fish mongering, alcohol, poultry and agriculture. The beneficiaries of LIS component engaged in slightly bigger enterprises, and while many of them succeeded as group enterprises, a number of members identified and exploited opportunities quite successfully on their own. **Throughout the evaluation waves, nearly half of the entrepreneurs felt that their enterprises were growing and improving (49.8%).** Over the years, this perception has been the same, with 41% of

entrepreneurs revealing improved performance at baseline relative to 54% who felt the same at endline. Indeed, there was consistent increase in monthly earnings from business enterprises from UGX184,000 to UGX333,000 at endline and the increase was significant ($F(2-4237) = 26.959$, $p < .05$).

Increased household food security and consumption

The number of beneficiaries eating 3 or more meals per day significantly increased from 7.6% to 23%. Most importantly, the households consuming one meal a day fell from 32.5% to 10.3%, and majority of these were DRF beneficiaries based in Karamoja subregion. There was increased consumption of tubers and root crops from 51.8% to 70.6% as well as consumption of meat from 26.6% to 41.1%. Although still small, there were relatively more households consuming eggs (from 9.1% to 21.6%), fish (from 25.6% to 40.7%) and pulses (from 41.9% to 59.4%). **Overall, however, majority of households (over 70%) consumed cereals, tubers and root crops, and vegetables.** This consumption was largely driven by increased production of these food types. Consumption of meat, fruits, eggs, fish, milk and milk products was generally low. Overall, therefore, dietary diversity remained poor. The percentage of households on borderline diet increased from 5.4% to 11.5% and those with poor diet reduced from 94.6% to 88.5%. **NUSAF3 increased food production at household level, helping households to become food secure and increase food consumption.** NUSAF3 trained people in improved agricultural practices while providing them with improved seeds and animal varieties. They attended practical demonstrations at the block gardens which enhanced food production using Oxen as they opened more acreage and utilized better agricultural methods, knowledge and skills. The allocation of ox ploughs helped in opening up more land and facilitated food production for not only the beneficiaries but all the local communities.

NUSAF3 strengthened social capital and cohesion

NUSAF3 approach strengthened social ties, networks and relationships of trust generally enhancing collective action towards group

and community challenges. Watershed members became united and carried out their activities as a group with similar objectives and goals. Even in times of adversity such as death, sickness or in times of need such as weeding of gardens, NUSAF3 beneficiaries stood with each other as a family. Trainings improved social relationships between and among people and reduced GBV at household levels. Up to 93% of beneficiaries admitted to living in harmony with each other. As a result, NUSAF3 groups transcended into stronger ties where individuals relied on one another, bound by trust, reciprocity, and networking. This reduced transaction costs, improved learning and most importantly fostered group activities such as produce marketing, saving and investment.

One of the greatest contributions of NUSAF3 was women empowerment

NUSAF3 impacted the women of Northern Uganda economically, socially and psychologically primarily by improving their income levels and ensuring their participation in project management and leadership. Through affirmative action and giving equal opportunities to women, NUSAF3 achieved a 55% participation rate of women in project delivery. Women earned income which they used to contribute towards their household expenditure like buying food, clothes, medication etc. thereby reducing the expenditure burden on husbands. Large proportions of female beneficiaries exhibited a good level of empowerment. For instance, while only 22.2% of the women had loans, 63% of these loans were acquired exclusively by the women, in their names for personal investment. These women did not need the permission of their husbands to obtain the loans (64.2%). Furthermore, women's opinions were listened to by their husbands. Women were particularly listened to when the husbands needed to buy expensive items for the households (59.7%). This demonstrates the ability of women to influence expenditure patterns in their homes, especially when such expenditure required huge sums of money. Up to 60% of the women beneficiaries had the power to make small expenditures. As well, women were involved in making decisions in their homes, especially with regard to allocation of assets between boys and girls in a household. Up to 58% of the women beneficiaries saved their money with the primary intention of investing

in an income generating activity. Such a finding is reflective of the women's desire to pursue economic independence as a business enterprise gives them the much-needed income. The three major reasons for saving money among women were to start a business, cater for the children's future (pay school fees), to purchase a specific item and to meet medical expenses in case any family member fell sick. These perceptions indicate a good level of financial and economic empowerment of the NUSAF3 female beneficiaries.

They also acquired household assets that improved life at home. Women were involved in decision making in their communities because NUSAF3 built their confidence and self-esteem in public speaking, interpersonal relations and leadership. They took part in activities like road construction, brick laying and using ox-ploughs which were traditionally done by men, thereby changing the gender stereotypes that some jobs were a preserve of men. The NUSAF women started and managed small-scale enterprises using the acquired knowledge and skills in saving, leadership, time management and planning. Some of these women rose into millionaires, helping large sections of family and society.

Environment and Natural Resource Management practices

There was improved green cover, less soil erosion, reduced environmental pollution and degradation in some areas due to NUSAF's tree planting, institutional greening, water system management and soil erosion control activities. The number of trees planted increased as a result of the tree nursery beds that had been established resulting in reduced surface run off. In other areas like the Kakoli Institutional Greening Subproject at Naboia Subcounty in Budaka district, beneficiaries participated in institutional greening turning the entire school green, creating sheds for children during breaks and turning a mud football pitch into a green one. Because of the greening, community sports activities are conducted at this school leading to improvements in the health of the community members while facilitating sensitisation and awareness of the communities and as a result, enrolment of children in the school has since tripled. In Manafwa district, NUSAF3 beneficiaries turned a rocky hill into a pine forest, managing to improve air quality, green cover and to significantly control surface runoff which improved soil fertility.

STAAC made a significant contribution to NUSAF3

The activities implemented by the IG provided an important ingredient for optimal utilization of NUSAF3 project resources by NUSAF3 beneficiaries. In other words, the IG succeeded in preventing what would have been a financial hemorrhage and instead, facilitated the channeling of such project funds for the intended investment purposes. **As a result of the massive sensitization and awareness raising activities, the community were not only informed about corruption but at the end, their patterns of behaviors and practices changed; many NUSAF3 beneficiaries were able to report malpractices, bribery,** embezzlement and other grievances to the responsible authorities and community support structures. In that way, project resources were rescued and channeled back to the rightful owners and rightful purposes. Further, the IG through the monitoring and inspection were able to prevent financial losses. The IG ensured that there were no 'ghost' sub projects, in addition to executing deterrent measures. Learning from the project stakeholders, quite a number of project resource persons such as community facilitators were relieved off their assigned roles in NUSAF3. Even as the individual attitudes, behavior and practices were positively affected, the more important outcome was that such positive changes in individual behaviors conformed to important sub project management practices. A number of NUSAF3 beneficiaries strongly believed that the improvement that they had in terms of their household incomes, value of household assets, and household resilience was a result of the work that the IG undertook.

Innovations and Recommendations

NUSAF3 project design was anchored on a number of innovations that allowed for learning, knowledge transfer and delivery of tangible results to the project beneficiaries. The design strengthened community potential to mobilise, coordinate, organise and implement community-based interventions as well as market driven investments for socio-economic transformation.

a) Disaster risk financing approach

DRF used a scientific approach to predict disaster and this worked out well for early warning and

triggering of response to drought risks. DRF provided temporary employment to beneficiaries during the dry season in exchange for cash. The cash helped beneficiaries to buy basic necessities while creating community assets at the same time. **This was a novel approach compared to the traditional approach of providing food relief. Government saved expenditure on relief food aid while at the same time community assets were created, livelihoods improved, savings went up and peoples' mindsets towards productive work were impacted.** Nonetheless, during the project, other risk factors came up especially landslides, floods, and infestations at beginning of cropping seasons. These disasters and their associated risks were spread in different parts of Uganda. It is important that a DRF approach is taken to addressing these risks, thus calling for a more robust risk early warning mechanism and a proactive response, revolving around DRF.

b) Village revolving fund (VRF)

The VRF was an investment fund accessed by Self Help Groups at village level through a loan system in a revolving manner. This was a capital reserve to support quick maturing businesses to grow over time, generally serving as a village bank in the targeted villages with minimal conditions for access. NUSAF3 invested UGX 15.9 Billion in the Village Revolving fund which triggered up to UGX 20 Billion in community savings. The SLP/VRF has supported 410 VRFs in 31 districts benefiting 1,470 SHGs and 33,348 beneficiary households with 72% being females. Implemented as a pilot, the VRF turned around savings, investment and business growth where it was implemented. **The Fund constituted a strong bottom up resource mobilization tool, giving the poor people access to capital at rates(below 5%) lower than commercial bank rates. The approach proved that with the same amount of money it is possible to reach more people and can avoid the dependence syndrome of grants.** The VRF is complementary and the benefit of reaching more people has been proven. It stimulates entrepreneurship and women empowerment. The approach also revealed existence of strong human resources in the communities in the form of educated young people who can guide communities to greater positive impacts. Future programming needs to tap into this approach, perhaps tying it with the parish model which has been built with lessons and experiences from NUSAF.

c) Community savings and LIPW were novel components of NUSAF3

Besides the Savings under VRF, the savings groups were helpful in creating cohesiveness, social capital and togetherness in communities. There was novelty in the use of IHISP and LIPW to provide people with income. **The deliverable focus on the poorest of the poor and the active poor, and giving them opportunities to earn income, save and invest was the first of its kind in Uganda.** In particular the LIPW model was novel in encouraging hard work, learning of new skills, formation of groups and learning how to save. The LIPW principle was a greater innovation that brought people to work together, while its components like tree planting restored the environment and improved community livelihoods. Allowing of LIPW groups meeting the CIG savings thresholds to upgrade into livelihood groups was progressive and supported emergency of consistent, focused and committed community entrepreneurs.

d) The Settlement-based development initiative

Settlement based development initiative in Karamoja delivered significant impacts. **Stemming from NUSAF2, this initiative demonstrated that it is possible to improve livelihoods and achieve socio-economic prosperity for poor households.** The initiative started with political leaders receiving practical training in the initiative to create initial buy-in and support. There is strength in communities to adapt modern ways and integrate them into their traditional ways to create welfare. There is need for more research on how this socio-economic system can work to suit other areas beyond Karamoja. The research should further inquire as to whether traditional generic programming is the way to go or interventions should be specific to the peculiar characteristics of a given community - rural urban variations, climate, land ownership, topography among others.

e) Strong partnerships with the private sector

By nature, a project operates within a specific timeframe and budget to achieve specific objectives. This means that it can be difficult to design and deliver a project successfully without partnerships with the private sector. This is particularly important because reliance on public

servants faces the challenge of a work culture that can frustrate project implementation. NUSAF3 has demonstrated that government-private sector partnerships improve efficiency, effectiveness and offer room for making sustainable interventions. The project supported local governments by bringing in additional expertise from private sector to back up public servants. As a result, trainings, supply of seedlings, and introduction of market information was key in driving the project. In particular, cage fish farming, diary farming, and seeds worked well because of this model. Future programming may consider strengthening such partnerships, bring on board other private partners such as financial institutions, manufactures, and telecom companies among others.

f) Partnership with Research Institutions

NUSAF3 built a strong partnership with Makerere University and Makerere University Business School. The partnership was premised on the fact that these training institutions possessed strong research expertise, and their involvement in development work would generate knowledge for advancement of scholarship and policy in Uganda. It would also expose both the academic staff and students to new knowledge for causing national development. Furthermore, being government institutions, the parties in the partnership benefitted from efficiency gains associated with continuity with the research activities. It is important that such partnerships are strengthened in future programming as they deliver more benefits than the traditional private consultancies for important functions of research.

g) Adoption of modern ICTs in NUSAF3

The workflow of NUSAF3 was digital and all submissions were electronic. This saved volumes of paperwork and a lot of money was saved on delivery of physical documents (fuel, allowances, wear and tear of cars and printing equipment). In monetary terms, this saving was in billions of shillings. The best was the time saving. The purpose-built MIS

was an innovation, used by the project across 67 districts. All of the stakeholders could log in any time to do their work and the system served them all. The biometric payment system was the first of its kind in Uganda. The electronic way of managing data is the way to go, including use of social media to share information with stakeholders.

h) Transparency, Accountability and Anti-corruption should be embedded in future programming

Packaging information and communication materials is vital to changing mind set change i.e. changing attitudes and ultimately practices towards whistleblowing or involvement in demanding for transparency and accountability. TAAC project implementers revealed during interviews that once the message sank-in that NUSAF3 was not a “*government project*” but rather “*our*” project, participants were more willing to engage in project activities; protect project resources; demand for accountability, and; report non-compliance or corrupt group members, service providers or other project implementers.

Transparency, Accountability and Anti-corruption should start at design, and continues throughout the project life cycle in order to be effective. The reason STAAC was hugely successful might as well be attributed to the overall design of NUSAF3, where the decision making responsibility for project management including in the use of project resources were largely the beneficiaries’. While there were cases where some project beneficiaries attempted to steal what belonged to the group, such errand members were immediately held accountable. By assigning the project management responsibilities and decision making to the beneficiaries and not the implementers, NUSAF3 limited opportunities for corrupt public officials to exploit from the project. It was also easy for the IG to enforce compliance with transparency, participation, accountability and anti-corruption because the project had clear implementation guidelines.

Chapter One // Background



1.1 Introduction

The Third Northern Uganda Social Action Fund Project (NUSAF 3) was a five-year project implemented between 2016 to 2021 in 66 districts of northern Uganda. The project was implemented by the Office of the Prime Minister with funding from the World Bank. The project sought to establish a comprehensive safety net for vulnerable groups by creating temporary work opportunities through public works, providing grants to promote income generating activities, and improving organization and monitoring mechanisms to promote transparency, accountability, coordination, and program management. The overall project development objective was **to provide effective income support to and build the resilience of poor and vulnerable households in Northern Uganda**. This report provides an assessment of the impact of the project on the beneficiary households as well as their communities as a whole. The impact evaluation was conducted from December 2020 to February 2021 by Makerere University Business School.

1.2 NUSAF3 Design and Components

The project implemented four components of **Labour Intensive Public Works (LIPW); and Disaster Risk Financing (DRF);** Livelihood Investment Support that contained two sub-components: **Improved Household Income Support Program (IHISP) and a Sustainable Livelihoods Pilot (SLP)**, Strengthening Transparency, Accountability and Anti-Corruption (STAAC) covered activities implemented by the Inspectorate of Government (IG) to improve transparency, accountability, and anti-corruption efforts and Safety Net Mechanisms and Project Management.

Component one: Labour Intensive Public Works (LIPW) and Disaster Risk financing (DRF)

The **LIPW sub-component** was designed to offer men and women in 499,000 vulnerable households 54 days of work on public works projects. Workers were compensated with wages of UGX 5500 per day (USD 1.4). The main objectives of LIPW were to (1) provide short-term employment to improve food security and consumption smoothing during the lean season, and (2) create infrastructure assets to mitigate the impacts of environmental degradation and improve access to markets and services. The

program financed wages, equipment, materials, and administrative costs for LIPW at the cost of USD \$49 million. A total of 3429 LIPW sub projects including Roads, Forestry, Environment, nursery beds and water sources have been funded.

The **DRF sub-component** was activated following disasters to scale up the LIPW activities temporarily and rapidly to provide additional support to core LIPW clients and/or to extend coverage to new beneficiaries. The ability to rapidly scale up LIPW was expected to prevent household consumption from dropping after climatic disasters and to protect their livelihoods and assets, leading to a more rapid post-crisis recovery. The DRF sub-component benefited up to 90,405 households. The DRF sub-component was piloted in the seven districts of Karamoja region due to the risk of drought in Karamoja, the poorest sub-region, and particularly prone to weather shocks, which in turn contribute to the area's high levels of poverty. The purpose of the pilot was to support the Government in developing the rules governing any scale-up and estimating the financial costs of different options.

Component two: Livelihood Investment Support

The Livelihood Investment Support component aimed to extend livelihood support to poor and vulnerable households and, by doing so, increase their productive assets and incomes. The LIS component was comprised of Improved Household Income Support Program (IHISP) and a Sustainable Livelihoods Pilot (SLP). The **IHISP sub-component** was designed to provide skills development training, livelihood grants, and mentoring support to 100,100 households. IHISP facilitated group creation (of 10 to 15 households) and savings; groups then applied for grants of up to USD \$5,000 to support existing and new market driven enterprises. USD \$42.5 million utilized to finance grants, technical support, administrative costs, and program capacity building. IHISP targeted poor but less-vulnerable households than LIPW. A total of 8,857 income generating sub projects were funded reaching 132,838 household beneficiaries. Projects funded were in agriculture, aquaculture, livestock, tree nurseries trade, horticulture and value addition.

The sustainable livelihoods pilot tested an approach to livelihood support that was expected to foster stronger community institutions through building strong village level community institutions

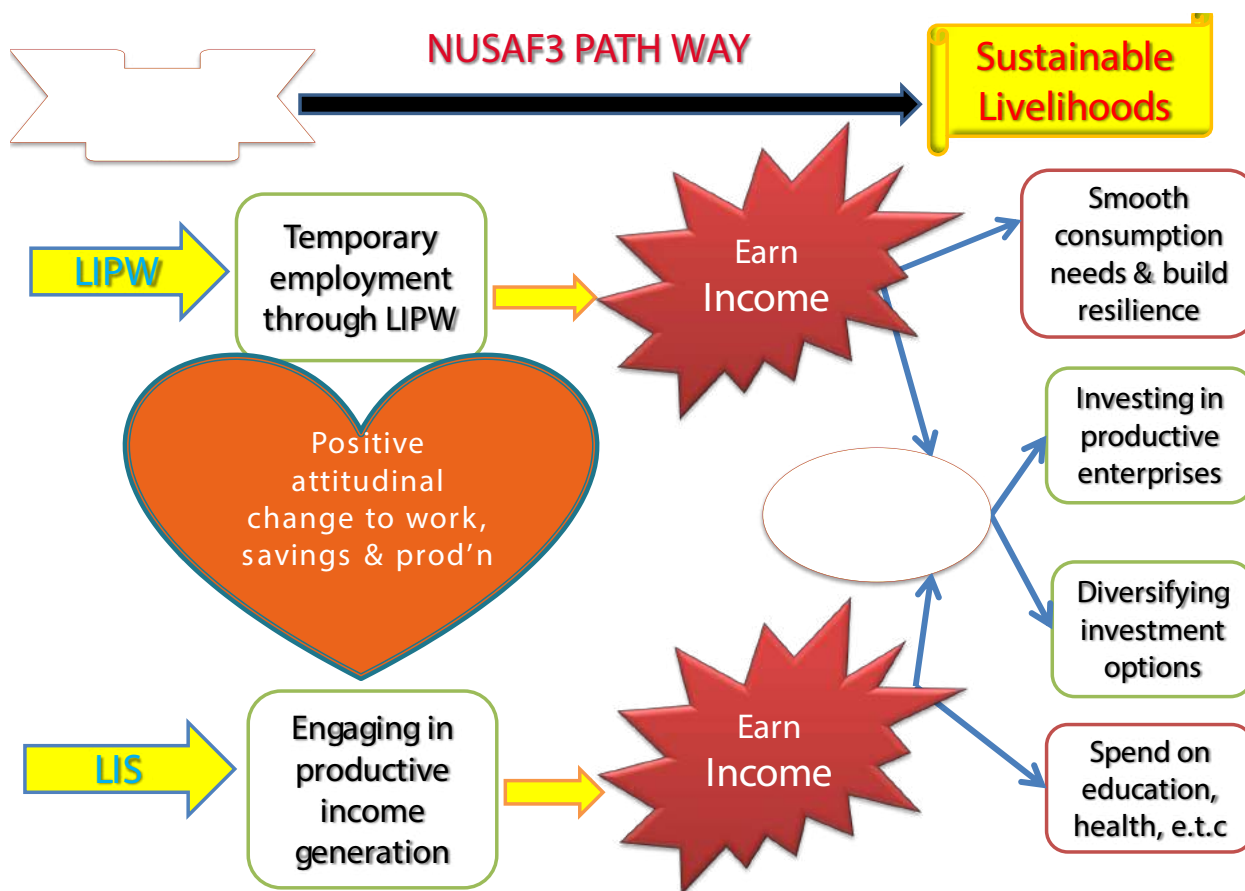
of the poor and providing business management support services to existing and new community interest groups (CIGs). **The approach sought to support household livelihood investments beyond the term of a community interest group subproject by focusing on self-help groups with beneficiaries accessing a village revolving fund rather than receiving grants.** The pilot focused on universal coverage of the poor in the target villages while tapping on already existing affinity poor community savings groups and mobilizing and supporting other poor households to form savings groups of their own. A total 410 VRFs were supported in 31 districts benefiting 1,470 SHGs and 33,348 beneficiary households to grow their capital and invest in profitable business enterprises.

The two components (LIPW and IHISP) were implemented at the watershed level to encourage systematic and sustainable natural resource management and development with both being implemented in the same watersheds for the purpose of creating synergies.

1.3 The Project Theory of Change

NUSAF3 was implemented on a Theory of Change (ToC) that emphasized a pathway of two broad interventions (LIS and LIPW). As seen in Figure 1, these interventions were expected to be synergistic and create sustainable livelihoods of poor households through both engagement in temporary work opportunities on public works and participation in productive income generating enterprises. The temporary work opportunities were in the form of labour-intensive public works on community assets such as opening access roads, digging or desilting valley dams, fixing spring wells and soil and water management projects. As the poorest of the poor households worked on these projects, they earned income part of which was expected to be saved for future investment while the other was spent to smoothen consumption and build household resilience to shocks.

Figure 1: NUSAF3 Project Theory of Change



On the other hand, the active poor were to engage in productive enterprises which were expected to generate income. As with the poorest of the poor households, these households were expected to save part of the income for enterprise diversification, investment and expenditure on basic social services such as education and health. The impact evaluation focused on how well the ToC was valid.

Income was at the heart of the household transformation and for this to be effectively used to create sustainable livelihoods, the project made efforts to create a positive mindset towards work, production and savings. The project created structures, delivered trainings and a number of activities geared towards attitude change, improved savings, and income generation. The evaluation team analysed the theory of change and concludes that it was valid and it facilitated the achievement of the results. ToC was well conceptualised especially in terms of the interventions, target groups and assumptions. The design and implementation structures were expected to support in the achievement of the ToC.

1.4 The Project Design

NUSAF3 implementation took a watershed approach to encourage systematic and sustainable natural resource management and development targeting households with similar characteristics and natural resource challenges. The project took a bottom-up approach, allowing beneficiaries to decide on their needs and interventions to address the identified needs. With the support of the district local governments and the NUSAF3 technical support team, the communities created project management structures to mobilise, coordinate, and manage subprojects within their communities. In these community leadership structures the poor women actively got representation through affirmative action.

The community structures received technical guidance and support from subcounty implementation support teams, district implementation support teams and several technical offices at the district level. These technical people worked with communities and once community sub-projects were ready for funding, the OPM released funds, allowing communities to receive and be in charge of the fund's utilisation. Whether the subprojects were under LIPW or under LIS, beneficiaries decided on what they wanted and that is what was funded, of course after technical evaluation by the relevant technical staff at the districts.

1.5 Achievements of NUSAF3

In 2016/17 Uganda had 8 million people living in abject poverty of which 89% lived in rural areas (UBOS NHS 2016- 2017). **Of these 5.9million lived in eastern and northern Uganda. Of these 5.9million, NUSAF3 reached out to 2.9million (or half of the poor people in northern and eastern Uganda).** These subregions were Bukedi, Elgon, Teso, Karamoja, Lango, Acholi, West Nile and Bunyoro. The project targeted 599,100 households of which 83.3% were to directly benefit from the Labor-intensive Public Works (LIPW) component, while the remaining 17% (100,100 households) were to benefit from Livelihood Investment Support (LIS). In total the project was expected to directly benefit a minimum of 2,995,500 people. Among all the beneficiaries supported, 55% were female. Overall, 31% of beneficiaries were youths aged 18–31 years.

About 1.86 million people benefited from cash-for-work, food-for-work and public works programs, and over 25.6 million-person work days were created and paid for by the project. The project further built 3459 community assets Roads, Forestry, Environment, nursery beds and water sources as well as 8857 income generating sub-projects. Table 1 below provides details of the project achievements.

Table 1: Summary of NUSAF3 Achievements

Output and Output indicators	Year 5 Target (planned)	Achieved as at May 2021	%age achieved
	# planned	# achieved	Number (%)
Number of household beneficiaries of the project	2,995,500	2,974,530	99%
Number of female beneficiaries	1,198,200	1,774,375	148%
Number of Households benefiting from post-disaster activities	84,000	90,405	108%
Percentage increase in the value of household assets of beneficiaries of LIPW and LIS	20%	22%	110%
Percentage of project beneficiaries satisfied with project interventions	80%	95%	119%
Intermediate results			
Beneficiaries of social safety net programs	2,495,000	2,310,340	93%
Beneficiaries of Safety Nets programs - Female	998,000	1,341,755	134%
Beneficiaries of Safety Nets programs - Unconditional cash transfers (number)	207,500	223,565	108%
Beneficiaries of Safety Nets programs - Cash-for-work, food-for-work and public works (number)	2,245,500	1,858,315	83%
Female beneficiaries participating in LIPW sub-projects	898,200	1,062,160	118%
Number of person days of employment created	26,946,000	25,564,410	95%
Number of community assets built by LIPW	3,170	3,459	109%
Number of household beneficiaries of Livelihood Income Support	100,100	132,838	133%
Number of female beneficiaries of Livelihood Income Support	50,000	86,524	173%
Number of Income Generating sub-projects completed	7,700	8,857	115%
Percentage of NUSAF3 SHGs who have accessed funds from VLIC in pilot villages for their livelihood business plans	70	100	143%
An MIS for LIPW and LIS developed and functional	System design and software complete	MIS Development finalized and operational	100%
Systems in place to collect and analyze data for triggers of DRF	System designed	System operational	100%
A national Guideline for LIPW design, targeting, implementation and M&E developed	In use	National Guideline for Labor Intensive Public work finalized and published	100%

Output and Output indicators	Year 5 Target (planned)	Achieved as at May 2021	%age achieved
% participating parishes with functional CMGs	85%	90.30%	106%
% participating Parishes in which SA is implemented using a CSC	70%	60.30%	86%
% of grievances registered about project that are resolved in a timely manner	70%	75.60%	108%
Of the total resolved grievances % representing non-project activities	20%	21.50%	108%

Source: NUSAF primary data

It is evident from table 1 that NUSAF3 achieved the planned targets. It is further noted that for LIPW, the achievement rate was slightly less than the planned achievement. This under achievement was due to fund reallocation to livelihoods which explains overachievement in livelihoods.

1.6 Objectives of the Impact Evaluation

The Northern Uganda Social Action Fund (NUSAF) is a government of Uganda program funded by the World Bank and it has been implemented for three rounds now. The first phase was scattered in 2003 and closed in March 2009, the second phase started in 2009 and closed in 2014 and the third phase started in 2016 and is set to close in June 2021. The purpose of the end of project evaluation was to assess the impact of NUSAF3 on the targeted beneficiaries and rural livelihoods in Northern Uganda. The evaluation is expected to demonstrate the impacts produced by NUSAF3 interventions. This could be positive and negative, intended, and unintended, direct, and indirect impacts. The evaluation aim establishes what has been the cause of observed changes ('impacts') referred to as causal attribution. The demonstration of causal attribution is specifically important because the project team is proposing to scale up the program implementation approaches through the country. Failure to systematically, demonstrated causal attribution will risk the scale up. The specific objectives of the end of project impact evaluation of NUSAF3 were to:

- To analyze the impact or changes that had occurred within beneficiary households because of the program.
- To examine the level of resilience of households as result of the safety nets mechanisms of the project.
- Measure the extent to which targeted households were progressing out of poverty (PPI).

- Identify important lessons to be learnt, best practices and make recommendations for the implementation of future projects.

1.7 Structure of the Report

The report is structured into eleven chapters. Chapter one contains the background to the impact evaluation. The chapter focuses on NUSAF3 Design and Components, the project Theory of change, summary of major achievements of each component and purpose of the endline evaluation.

Chapter two contains an outline of the methodology used to undertake the endline evaluation. The focus of the chapter is on the study area and sample selection, field organization, data quality control, data processing, construction of indices, the econometric methods and the Diagnostic tests conducted.

Chapters three to ten focus on the impacts of NUSAF3. These impacts are on household resilience; household welfare; household assets; access and use of community infrastructure; incomes, employment, and livelihood; enterprise development and business growth; food security, consumption and production; social capital and cohesion and adoption of environment and natural resources management practices.

Chapter eleven contains findings on the contribution of the STAAC component to NUSAF3 implementation.

Chapter twelve provides conclusions, interventions sustainability strategies and recommendations for future programming.

Chapter Two // Evaluation Methodology



2.1 Evaluation design

The study used a non-experimental design to estimate the project impacts on the targeted beneficiaries. At baseline, the study targeted both beneficiaries and non-beneficiaries but when the midline evaluation was conducted, even beneficiaries originally considered non-beneficiaries had participated in the project. This was primarily because of the fact that the local leaders (both technical and political at the district level) considered it unethical to support some households and leave the others when all of them suffered from poverty and vulnerability. This unethical question about experimental designs has also been raised in literature (White, 2013). Moreover, the design of NUSAF3 was not to have two parallel groups of beneficiaries, where the control group would also be supported later after the treatment tests. The project rolled out at once and such control considerations were not made. Furthermore, the targeting mechanism of the project considered the poorest of the poor and the active poor. Inherent in this mechanism was the selection bias which would make comparisons difficult. Randomisation effort was made at baseline, selecting beneficiary and non-beneficiary households but the insistence of local leaders to support all eligible beneficiaries (on ethical grounds) made it difficult to proceed with the design.

Given the difficulties of executing an RCT, the evaluation team chose to use a quasi-experimental approach to trace changes in beneficiary households. Panel data has extensive use in impact evaluations (Ferraro and Miranda, 2014; Hsiao et al., 2012) and it is deemed fit for treatment exclusive grouped data like NUSAF data. By blending the inter-individual differences and intra-individual dynamics panel data usually contain more degrees of freedom and less multicollinearity, hence improving the efficiency of econometric estimates (Hsiao, Mountain and Ho-Ilman, 1995). Panel is also believed to have greater capacity for capturing the complexity of human behavior (Hsiao & Yanan, 2006). Panel data accounts for all time observations (allows for all waves) – unlike pre- and post-treatment outcome measures, and allows for isolating the effects of treatment from other factors affecting the outcome (Hsiao, 2013).

In this study, both qualitative and quantitative methods were employed in the collection and analysis of the required data to address the evaluation questions. The methods revolved around extensive consultations and active participation of

the key stakeholders. A cohort tracking approach was deployed to gather information from the same beneficiaries contacted at baseline and midterm review. Using project-level composite indices, we measured changes on a number of project indicators at the household level with aim to determine whether NUSAF3 interventions made a difference to household effective income and resilience of poor and vulnerable households in Northern Uganda. A specific question was asked as to whether a respondent had benefited from any other intervention, and those who answered were excluded from the analysis (but these were 0.1% of the sample size). The purpose was to try and ensure that the only intervention talked about was NUSAF3.

2.2 Study area and sample selection

The population for the impact evaluation is the poor and very poor households located in eight regions of northern Uganda where NUSAF3 was implemented. These regions are: Bukedi, Elgon, Karamoja, Acholi, Lango, West Nile, Bunyoro and Teso. In these regions, there was a total of 100,100 poor households to benefit from IHISP; and 499,000 very poor households to benefit from LIPW; and 84,000 based in Karamoja to benefit from DRF.

The formula (i) (Krejcie and Morgan, 1970) below was used to calculate the sample size for the poor households in each of the districts which were included in the survey. The sample size was determined by the accuracy required for the survey estimates, as well as by the resource and operational constraints. The sample size was also determined by the geographic levels at which the survey data would be tabulated as well as the type of interventions made. Since reliable estimates for key indicators were needed for each of the two main interventions (Labour Intensive Public Works and Livelihood Investment Support) in the 8 sub-regions, it was considered necessary to ensure that each sub-region had a sufficient sample size.

For the poor and very poor people, the household (HH) was the basic sampling unit covering indicators that were defined in the program document. The formula below was used to estimate the sample size for the poor benefitting from each project component:

$$n = \frac{Z^2 NP(1-P) \cdot Deff}{d^2 (N-1) + Z^2 P(1-P)} * \frac{1}{r} \dots \dots \dots (i)$$

Whereby,

n= number of poor HHs (i.e required sample size).

N = the population size

d = desired level of precision or permissible error which is assumed to be 0.03

Z = the table value of chi-square for 1 degree of freedom at the desired confidence level of 95% such that z= 1.96 at 95% level.

P = the population proportion (assumed to be .50 since this would provide the maximum sample size)

Deff¹= This is the Design Effect assumed to be 1.5 as recommended whenever DEFF is not known for most sample surveys.

r = response rate estimated at 90% as used to calculate sample size for surveys.

In order to improve on the precision of estimates and for a more balanced distribution of the sample, the square root proportional allocation formula (iv) below was used to distribute the samples across regions, and districts. The larger the number of population units in a region and district, the bigger the sample size.

$$n_i = \frac{\sqrt{N_i}}{N} * n \dots \dots \dots (iv)$$

Whereby;

n_i = Sample of households from the ith each sub-region,

N_i = The estimated number of poor people in the ith sub-region,

N = Sum of all individual square roots of total poor population in each sub-region and

n = the total sample size for a component

¹ Design effect (DEFF) is a “correction factor” to account for the heterogeneity between clusters with regard to the measured indicator.

The above sampling method was maintained at baseline, midline and endline evaluations. The purpose wanted to be able to engage the same respondents to be able to measure changes on a number of project indicators.

The baseline and midterm samples were selected scientifically using a three-stage cluster stratified random sampling design (to select the regions, districts, and watersheds where the households were located). In total, the project impact evaluation concentrated on 26 districts; 17 districts (two from each sub-region and three from Karamoja sub-region) for LIPW, IHISP and DRF, as shown in table 2, while SLP had 9 districts. Overall, the impact evaluation covered 4198 beneficiary households for LIPW, IHISP, DRF and SLP. As shown in table 3, 21%, 30%, 24%, 16% LIPW, IHISP, DRF and SLP households dropped off respectively.

Table 2: Sample Size

	Component				Total
	LIPW	IHISP	DRF	SLP	
Baseline	1802	1864	579	1230	5475
Midline	1419	1298	629	959	4305
Endline	1420	1304	442	1032	4198
Attrition rate	21%	30%	24%	16%	

Source: NUSAF primary data

Overall, the impact evaluation targeted 5475 beneficiary households for LIPW, IHISP, DRF and SLP but 4198 were reached, representing 77% response rate.

Additional issues considered in the methodology

a) **Confidence level**

That is, how certain you want to be that the population figure is within the sample estimate and its associated precision. Therefore, in this study, a 95% confidence level was used to select the representative sample sizes.

b) **Confidence interval for variables**

Confidence interval (CI) for a variables or indicator values was generated during data analysing using Stata. For example, for proportions (^p), the 95% CI are calculated using the formula below;

$$p \pm 2(SE_p)$$

Whereby;

$$SE_{\hat{p}} = \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$$

Alternatively; for measures of central tendency, e.g. the mean (\bar{x}), the 95% CI is calculated as follows;

$$\bar{x} = \pm 2(SE_{\bar{x}})$$

c) **Margin of error or precision**

It is a measure of the possible difference between the sample estimate and the actual population value. In this study, the permissible error was 0.03 for HHs and 0.05 for districts. Kish (1965) recommends $e \leq 0.1$.

d) **Attrition**

According to Miller & Hollist (2007), when data are collected over two or more points in time, it is common for some participants to drop out of the study prematurely. Attrition of the original sample represents a potential threat of bias if those who drop out of the study are systematically different from those who remain in the study. The result is that the remaining sample becomes different from the original sample, resulting in what is known as attrition bias. However, if sample attrition over time is not systematic, meaning that there are no unique characteristics among those who drop out, then there is no attrition bias, even though the sample has decreased in size between waves of data collection. It is important, then, for researchers who collect multiple waves of data to check for attrition bias. The attrition rate of 5% (210 HH) was added to the target sample.

Mason (1999) emphasized the importance of creating a project identity, offering cash and other incentives, developing a strong tracking system to constantly identify the location and status of participants, and keeping follow-up interviews brief. Others recommend collecting detailed contact information about participants to increase the likelihood of locating them for the second and subsequent interviews. In this study, detailed contact information was collected from the participants, including GPS coordinates of their households.

e) **Desired power**

In the literature the desired power is often set at least 0.8 (or 0.9): i.e. in 80% (or 90%) of sampling units subject to the accuracy of the true estimates (Browne et al., 2009). Sample size calculations should be considered as rough guides only, as there is always uncertainty in the true estimates, and there are often practical limitations to consider as well, such as maximum feasible sample sizes and the costs involved. In this study, level of significance (α) is 0.05, therefore the power of the test ($1-\beta$) = 0.95 (or 95%). So here the 4027 HHs is more than ample to give a large power.

2.3 Selection of study respondents

Once in a district, data was collected from poor households living in the specific watersheds where the project was being implemented. The data collection team went back to the same villages and households where baseline data and midterm data was collected. As a data validation method, the GPS coordinates were collected once again, and for data to be accepted, the coordinates for the same households had to match for baseline, midterm and end term.

From each selected HH, only the household head or the person who participated in NUSAF3 activities was eligible to participate in the survey.

2.4 Pilot Testing of the Study Tools, Data Collection Formats and Processes

The evaluation team pilot-tested the quantitative tool at the baseline. It is the same tool was used at midline and endline, with slight modifications. The baseline pilot study indicated that majority of the beneficiaries were unable to speak English. Therefore, all the enumerators were native local language speakers. During their training, the enumerators worked within their linguistic groups to translate the questions and be sure that all meaning was captured. They conducted interviews in vernacular.

All the tools were installed on the Tablets which were used during fieldwork to collect the data. The installation was followed with pre-testing the tools, the purpose of which was to test early enough the adequacy and responsiveness of the tools and technology to collect the information and data necessary for reaching relevant findings

and conclusions and generating effective recommendations. This was especially necessary because of the added modules to the tools. The same technology and software were used at the midterm and baseline surveys.

The pre-testing helped to re-word questions, improve the sequencing of questions, insert skips and understand the interpretation of questions in a localized setting and to ensure that the enumerators had the same understanding of the questions in their local languages. During pre-testing, enumerators had an opportunity to practice use of electronic equipment especially the Data Collection Tablets. After the pre-testing exercise, tools were refined, enumerators debriefed and deployed to administer the tools. To the extent possible, the enumerators who worked at baseline and midline were the same that worked at endline.

2.5 Data collection and field organization

Data collection had two main components: household survey and qualitative data collection. Teams collecting quantitative (household survey) and qualitative data were deployed simultaneously. Each district was allocated a set of enumerators who had a supervisor. The supervisor was a more experienced, technical and proactive person. These teams were also supervised by a regional supervisor who was also in charge of qualitative data collection. In total, there were 150 enumerators and eight qualitative data collection specialists. The teams had a mixture of skills including business management, statisticians, econometricians, Micro-economists, Agricultural and development economist, Environmental economists and entrepreneurship, Computing/ICT, social scientists among others split between quantitative and qualitative lines. There was an overall technical supervisor for all regions, and the evaluation team leader who provided both technical and administrative support. The supervisors ensured that the data submitted everyday met the minimum quality requirements. The data was relayed to the servers at MUBS and NUSAF3 offices in Kampala, and the submissions were reviewed every day until the whole field exercise ended.

Qualitative data collection

The qualitative methods included desk review,

focus group discussions (FGDs) and one-on-one, in-depth interviews. The tools used were interview guides, designed to collect data from each category of stakeholders. The goals were to elicit an understanding of (a) processes in place for project delivery, (b) successes and impacts at household and community levels, (c) perceptions of the quality and usefulness of program services and satisfaction with the program, (d) suggestions for program improvement, and (e) the intra-household and community gender dynamics that hinder or promote the participation of men and women in program activities and governance. The use of qualitative data collection shed light on perceived short term and long-term effects of the program, as well as the effectiveness of program delivery structures. The qualitative information collected on views and perceptions on key issues and concerns, and specific focus was paid on how these perceptions and views changed since baseline. To effectively measure these changes, the evaluation team targeted the same types of respondents, and where possible (because some government officials were regularly transferred, and some beneficiaries would not be available for several reasons), the same person interviewed at baseline and midline was engaged.

In-depth qualitative interviews were carried out with 5 key informants in each district and at least two beneficiaries of the LIPW and LIS. The informants were purposively selected to encompass divergent views and roles in the LIPW/LIS planning and implementation. The beneficiaries were also purposively selected to highlight extreme cases, i.e. the positive and negative cases, special interest groups such as disabled, old, pregnant, HIV positive and child headed households. An open-ended approach was adopted, whereby the research participant started by narrating their life-story, i.e. their role in the LIPW/ LIS. Issues such as their role, how they perceived the respective subcomponent and notable developments overtime or important turning points and future insight were captured. A total of 130 Interviews were conducted.

For stakeholders at strategic level (project management level), strategic interviews were conducted. These followed interviews from the field to allow for corroboration of certain findings. Additionally, the evaluation team used participatory methods to get more understanding of the beneficiaries' perspectives. Participatory methods limit top-down approaches and take into account

of the local priorities, processes and perspectives. By using participatory methods, the evaluation team addressed issues of unequal power relations, positionality and ethnocentricity that are typical of penurious and difficult settings. Kindon et al. (2007:1) state that participatory research "... involves researchers and participants working together to examine a problematic situation or action to change it for the better." Specifically, the Participatory Rural Appraisal (PRA) was adopted so that the researchers could relate well with the research participants. This method has been found to be appropriate for conducting research in marginalized, or vulnerable communities. In each district, three life stories to illuminate the changes that the beneficiaries experienced were documented.

Focus group discussions

The major advantage of using FGD in impoverished settings is that participants tend to find strength in numbers and they feel less intimidated than during face to face interviews. Such group discussions provide an ideal platform for using PRA techniques. The evaluation team engaged three separate FDGs for women, youth and Men in each district. The groups were kept quite small (between 5 to 7 people) so that all participants could engage in the participatory methods. FGDs were used to generate information for cost-benefit analysis of selected enterprises. However, the analysis will also be enriched with information gathered through both in-depth interviews and document review. FGDs also provided information on a number of project indicators.

2.6 Quality Control Framework

The basic tool for quality assurance in this study was the quality plan which described the quality assurance procedures that we put in place in execution of the assignment. The quality plan consisted of a number of procedures describing the project organization and how specific tasks were to be performed and the level of responsibilities. Furthermore, the plan specified procedures for project control (self-check, discipline check and document check) procedures. Overall, the exercise was led by a team leader in charge of administration and logistical support. The team leader was deputized by a technical team leader who worked closely with all the 8 supervisors.

These supervisors oversaw the work of enumerators but also collected the qualitative data. To ensure collection of quality data, the team were trained at MUBS, Kampala Capital City. Five days of training and practical exercises acquainted the supervisors with techniques of conducting key informant interviews, FGDs and dyadic interviews. The deputy team leader ensured that the supervisors collected the right data by conducting field visits and listening into some of the interviews, and having field discussions to address any emerging challenges. The OPM further sent field supervisors who again attended specific interview sessions to confirm whether the right information was being collected. The emerging data was stored both as recorded audios and handwritten notes. Data was cleaned and duplicates of project beneficiaries were dropped in order to match Baseline and End line data points.

2.7 Construction of indices

In order to measure impact of NUSAF3, a number of indices were computed. These include the Food Security Index, Food Consumption Score, Resilience Capacity Index, Wealth Index, Progress out of Poverty Index, coping strategy index and commercialisation index.

Food Consumption Score

The Food Consumption Scores were computed based on the dietary diversity consumed by beneficiaries in the past 7 days before the survey. The method used was adopted from the WFP-FAO measures of food consumption. The measure Looked at nutrients consumed and score weights attached to each food item were summed and categorised as Poor for those between 0 to 21, Borderline for those that scored between 21.5 to 35 and acceptable category for the beneficiaries that scored above 35 points. To compute the scores, weights were attached to food groups shown in table 3²

² Food consumption score:
<https://documents.wfp.org/stellent/groups/public/documents/ena/wfp196627.pdf>

Table 3: Food Groups and Weights

Maize, Maize Porridge, rice, sorghum, millet pasta, bread and other Cereals	Cereals and Tubers	2
Cassava, Potatoes and sweet Potatoes		
Beans, peas, ground and Cashew nuts	Pulses	3
Vegetables and Leaves	Vegetable	1
Fruits	Fruit	1
Beef, goat, poultry, pork, eggs and fish	Meat and Fish	4
Milk Yoghurt and other diary	Milk	4
Sugar and sugar Products	Sugar	0.5
Oils, fats and butter	Oil	0.5
Condiments	Condiments	0

Source: NUSAF primary data

The Food Consumption Score (FCS) is an index developed by World Food Programme to help in aggregating household level data food diversity and frequency of specific dietary consumption (Gerald & Dorothy, 2018). The FCS has been widely used to monitor and evaluate food security in a number of countries, with WFP applying it to more than 2000 studies worldwide (Marivoet, Becquey & Campenhout, 2019).

Coping Strategy Index

The Coping Strategy Index (CSI) has been used to demystify the extent of food security attributed to NUSAF3 project. The CSI helps to explain the severity of exposure to coping mechanisms during limited access to food. The CSI is suited to a rural-based community since it is simple, straightforward to understand and sensitive to short-term changes such as seasonality and shocks, however major or minor (Maxwell et al. 2003). Selected coping strategy indicators help to minimise the risk of classifying a food insecure household as food secure and are useful in identifying sources of vulnerability (Maxwell et al. 1999). CSI has been successfully used in a number of countries, including Uganda (Mayanja, Rubaire-Akiiki, Greiner & Morton, 2015). The higher the total score of CSI the more likely the household is reported to be food insecure. This strategy has been developed and applied by international food aid agencies in Uganda, Kenya and Ghana. It has now been adopted by a number of countries in the Middle East to measure their state of food insecurity. The CSI index tested the level of food sufficiency

among NUSAF3 households. The index helped to argument whether meals and diet consumed were really sufficient or insufficient (Daniel M. & Caldwell R, 2008). To compute the score, the evaluation team used the following formula.

$$\text{CSI Score} = (\text{frequencyCSI} * \text{SeverityCSI}) + (\text{FrequencyCS2} * \text{severityCS2}) + (\text{frequencyCSn} * \text{severityCSn})$$

The resultant index score represents the severity of the insecurity.

Poverty Progression Index (PPI)

In order to assess progress out of poverty among project beneficiaries, the evaluation team computed the progress out of poverty Index (Grameen Foundation, 2015). The index uses scores based on responses on each of the ten questions measuring key elements related to livelihood. These indicators include size of household, attendance of school for children of school going age, literacy of household head, material used in construction of house (wall, roof and floor), household energy sources, toilet facility used, ownership of mobile phones, radio and clothing. PPI is promoted as a tool that is useful in measuring programme impact as it can quantify the share of program participants living below the poverty line and assess performance of interventions over time (Desiere, Vellema, & D'Haese, 2015; Blauw & Franses, 2011; Larsen & Lilleor, 2013). The PPI has been developed with the specific aim to measure poverty at household level. The 2015 Poverty progress index guide for Uganda

guided the computation of the Indices³.

Wealth Index (WI)

The Wealth index is considered an effective indicator of long-term socio-economic position, living standard or material well-being of a household (McKenzie 2005). The index performs as well or better than expenditure data in explaining variation in education, child mortality, nutrition, fertility and health care use (Filmer and Scott 2012). The Wealth Index is constructed on the basis of the assets available in a given survey data to be able to explain living standard of households (Smits & Steendijk, 2015). In this study, the wealth Index was computed based on Productive and None productive household assets which were categorised into have it and not have it. The purpose was to assess the progress made by these households in the area of welfare and standard of living. This index ranks households into poorest, poor, average, better and wealthiest households. The final variables that were included in Wealth Index computation were identified using Principle Component analysis which, where correlated variables were diagnosed and dealt with.

Resilience Capacity Index (RCI)

In this study resilience is viewed as the capacity of households and communities to adapt to a new strategy in the face of shocks and crises. Constructing the RCI starts with identifying the attributes that contribute to household resilience (d'Errico, Romano & Pietrelli, 2018). In identifying the attributes, the evaluation team relied on the Food and Agriculture Organization of the United Nations' Resilience Index measurement and analysis (RIMA)⁴. Resilience Capacity Index was constructed based on categorisation of variables into:

- a) Basic Social Services: access to improved sanitation, livestock market and fresh food/ roadside markets, access to clean water sources, access to medical care and education.
- b) Productive assets: ownership of land, access to agricultural land, ownership

of livestock, ox-plough ownership, other wealth

- c) Social safety nets: savings, formal transfers, informal transfers, access to credit
- d) Adaptive capacity: income generating activities, crop production, education of household head, coping strategies.

These factors have been recommended as proxy measures of resilience (FAO, 2016). Linear scaling was executed to create a standard scale ranging from 0 to 100.

2.8 Econometric methods

Normality of variables

In this study, statistical tests for normality were conducted in order to ensure data follows a normal distribution with the use of Skewness/Kurtosis test for normality. In circumstances where p-values of the variables were less than 0.05, implying that variables were not normally distributed, the affected variables were transformed into natural logarithm to ensure they followed a normal distribution. Natural logarithm was used to transform continuous variables.

Multi-collinearity among variables

In the current study collinearity tests were performed to determine if the independent variables had linear relationships with each other. The Tolerance value indicates the amount of variability of a given variable that is not explained by other independent variables while the VIF (Variance Inflation Factor) is the inverse of the tolerance value. Low tolerance values (less than 0.2) and higher VIF values (greater than 10) imply existence of multicollinearity. Results in this study indicated that all tolerance values were below 1.0 (Neter et al., 1990) and the VIF values were all below 10 (Ender, 2010), implying non-multicollinearity among the predictor variables.

Model specification test

Econometric model misspecification was also tested based on a comparison of two different estimators of the model parameters for the panel data. The estimators compared should exhibit the properties that (i) under the null hypothesis of correct model specification both estimators are consistent for the "true parameters" of the model (those corresponding to the data generating

³ Progress out of poverty index:

<https://www.povertyindex.org/country/uganda>

⁴ Analyzing Resilience for better targeting and action: Food and Agriculture Organization of the United Nations Rome, 2016

process), whereas (ii) under misspecification (the alternative hypothesis) the estimators should have differing probability limits. The selected Hausman test evaluated panel model estimated with fixed effects versus random effects. The results from the Hausman tests on all the models failed to reject the null hypothesis that the Random Effects models were appropriate suggesting that the differences between the FE models and the RE models were not systematic. Therefore, Random effects model were appropriate based on the insignificant p-values. These tests were computed for each model and are presented throughout the evaluation report.

Breusch and Pagan Lagrangian multiplier (LM) tests for random effects

The selected random effects models were further examined with the use of Breusch and Pagan Lagrangian multiplier (LM) test to test whether Pooled OLS regression was the appropriate model to apply for analysis. Based on the probability value ($p < .05$) of the Chi-square, Breusch and Pagan Lagrangian Multiplier (LM) tests for random effects results failed to reject the null hypotheses that the Pooled OLS models were appropriate. The recommended pooled Ordinary Least Squares models were further examined for heteroscedasticity.

Based on the probability values ($p < .05$) of the Chi-square, the null hypotheses at 5 percent level of significance were rejected, concluding that heteroscedasticity was present. Due to presence of heteroscedasticity, the results obtained through significant tests could be invalid and inaccurate. To minimize the problem of heteroscedasticity, the evaluation team estimated the pooled OLS models with robust standard errors as deemed suitable in empirical studies⁵.

Approach and Estimation Procedure

Data collected was from only the treatment group without any comparison/control group. This rationality at design stage was premised on the backdrop that NUSAF as government project should target all, without categorization of the beneficiaries against non NUSAF Beneficiaries. Arguably the treatment is expected to affect the comparison group either directly or indirectly. Details on the rationale of the evaluation design are provided in sub-section 2.1.

⁵ Munyaradzi, E. G (2014). Education and Economic Growth Nexus in Sub Saharan Africa. International Journal of Economics, Commerce and Management. Vol II, Issue 6.

In order to establish the impact of NUSAF project, a single difference observed changed Pre-Post Approach was adopted as well as multi variate Panel data analysis to examine the relationships between a dependent variable (Impact dependent variables) and explanatory variables (including project components as dummies). The observed changes through NUSAF intervention were captured by tests of significance by comparing project beneficiaries' situation before (baseline) and after the intervention (Endline). The proposed approach is supported by previous studies including such as Khandker et al. (2010)⁶ and Mataia et al. (2015)⁷. The estimated impact of the project is the difference of the "before" and "after" outcome with the before intervention scenario utilizing baseline data and end of project monitoring data measuring the outcome after implementations of the project. This approach was adopted because it provides preliminary evidence on effectiveness of the intervention especially when supplemented with complementary and evidenced-based information. Establishing of the impact of the proposed intervention followed computation of tests for observed changes by comparing project beneficiaries' situation before and after the intervention.

Additionally, the magnitude or extent of the impact was determined by multivariate analysis. The multivariate Panel data approach introduces additional variables, allowing for a more comprehensive understanding of program dynamics - allowing for isolation of the effects of treatment from other factors affecting the outcome and may allow one to control the effects of missing or unobserved variables (Hsiao, 2013). Panel data has been extensively used in impact evaluations (Ferraro and Miranda, 2014; Hsiao et al, 2012).

A panel model equation (1) was estimated for the impact of individual household and community characteristics (), individual household changes and NUSAF project components () on outcome (Household resilience capacity, Poverty Progression, Household wealth, Household incomes, Business enterprise development and food security):

⁶ <https://openknowledge.worldbank.org/handle/10986/2693>

⁷ Alice Briones Mataia et al , (2015). Impact of Farmer Field School-Palaycheck (R) in the Irrigated Rice Areas in the Philippines

$$W_{it} = \alpha + \beta X_i + \gamma Y_{it} + v_{it}$$

Where: $v_{it} = \alpha_i + \varepsilon_{it}$; $i = 1, 2, \dots, N$, $t = 1, 2, \dots, T$

α_i = Individual household-specific time-constant error term,

ε_{it} = time-varying error term

β estimates the impact of time-constant predictors

γ is the parameter measuring the impact of time varying predictors

2.9 Evaluation Challenges

The period of data collection coincided with an election season culminating into closure of social media (tool for team coordination) and the internet, rendering transmission of data and extraction of files from the servers difficult. The political season also affected availability of leaders at the district level as they were engaged in political activities. However, we patiently waited and that is how the fieldwork lasted longer than had earlier been planned. One effect of these delays was the inability to start data cleaning, merging and processing early.

In many parts in the countryside, there were heavy rains and a number of roads were broken. Some places were completely inaccessible for some days, while others (on lake Albert and Lake Kyoga) were completely flooded. On Lake Albert, whole communities had been submerged and locating the dispersed beneficiaries took time. In other areas, especially Buliisa, Kiryandongo and Karamoja certain beneficiaries had migrated. Locating them always took time.



Chapter Three //

NUSAF3 and household resilience to shocks



3.1 Introduction

This chapter focuses on the impact of NUSAF3 interventions on the resilience of households. This is important because the development objective of NUSAF3 was to provide effective income support to and build the resilience of poor and vulnerable households in Northern Uganda. The analysis takes both qualitative and quantitative perspectives, the latter utilising descriptive statistics and econometrics.

3.2 Qualitative findings on the Impact of NUSAF3 on households' resilience

Resilience includes the ability of communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses without compromising their long-term prospects (The UK Department for International Development (DFID), 2011). It is about capacity to absorb disturbance and re-organize better (Cutter, Barnes, Berry, Burton, Evans, Tate, & Webb, 2008). This understanding implies that resilient communities should advance to a better state through learning and adaptation (Adger et al., 2005; Klein et al., 2003; Folke, 2006). Learning is important because people are able to discern what works and what does not work and thus make the right choices with regard to the causes of shocks and how to allocate resources to deal with the shock effects and their root causes.

At the core of NUSAF3 project lies the principles of learning, adaptation and dealing with the root causes of the stresses. These principles are embedded in all of the interventions. Indeed, the project measures resilience in terms improved capacity to manage risks; improved adaptive capacity; and improved development indicators. Capacity to manage risks includes having the resources (household and community assets, social capital, knowledge, income, savings, etc) to respond to risks while adaptive capacity entails change in attitudes, learning and engagement in new and better activities. The choice of indicators is reflective of the need to reduce vulnerability by deliberating tacking factors such as socio-economic status, education, health and sanitation, and food insecurity that perpetuate it (Katongole, 2020).

The baseline study indicated that communities in the project area were vulnerable, living in

abject poverty and lacking the basic necessities of life including food, decent housing, medical care, income, savings among others. They were vulnerable to both natural and manmade disasters including drought, floods, landslides, soil erosion and economic shocks. NUSAF3 project helped them (especially women and youth) to become resilient through offering paid employment in public works, savings and trainings in various aspects of resilience. The project organised them into 8857 income generating groups. The midline evaluation indicated significant progress of the beneficiary households in terms of income, savings, food security, access to credit, business development and learning. The endline evaluation confirmed a strong narrative among project beneficiaries and implementers in favour of improved resilience indicators. This was also observed by a number of leaders at the local government level. 100% of NDOs, and 80% of local leaders said that NUSAF beneficiaries learnt how to save, manage business and were able to pay debts. For instance, the CAO of Apac district observed that there was a improvement in the livelihoods of the community members. Incomes of community members improved through direct involvement in LIPW and from other sources attributed to NUSAF3, particularly investment in various small-scale businesses and assets.

Most members produced enough food to sustain needs of their families, surplus was stored or sold to earn income. The lifestyle of NUSAF3 beneficiaries changed as people ate more meals per day, had enough food and had regular income. There was physical evidence that general hygiene and sanitation also improved as people were able to buy soap, bath and dress well. They learnt how to save, manage business and were able to pay debts. Men had money to buy animals and they had seeds to plant for food. **Conceptually, improvement in income, investment, savings, food production, asset ownership and hygiene are indicators of improved resilience.** The excerpts in spotlight 1 demonstrate reduced vulnerability and improved resilience of NUSAF3 beneficiaries. Such is evidence that the ToC was well thought through and the project went a long way in achieving its development objective.



Spotlight 1: Voices of leaders on improved NUSAF3 beneficiary resilience

The community members now have more money than they did before and this money helps them to solve some problems in the home. Some have constructed “mabati” houses and others have bought cows. Others have been able to send their children to school. There is improvement in the livelihoods of the beneficiaries as a result of them being able to access loans from the group to solve any emergencies. **CPMC, Buliisa District.**

The people who got knowledge and put to practice have had positive changes, for example myself. The seeds that I got, I planted and the money I got from the yields I have bought 3 acres of land which am using for cultivation. From that I cultivated (groundnuts) I got 35 bags and got about UGX 3,200,000. I am planning to use that money to reinvest in produce and start a produce business. **CPMC, Pader District.**

Enterprises implemented by beneficiaries changed the lives of the members of the groups/ community. For example, trainings improved social relationships between and among people, reduced GBV at household level, alcoholism among group members reduced with all its associated disadvantages, and saving culture has improved the level of responsibility and cooperation. There is increasing enrolment rates as children go to school. Children less than one year are taken for immunization, expectant and lactating mothers go for antenatal care while households have established washing facilities, rubbish pits, drying racks, compound maintenance, hence improved hygiene and sanitation. **District Community Development Officer, Napak District**

Apiary has increased honey production and supply to Kenya in tons per week and trucks come in to load maize to Kenya and Mbale. Attitude towards tree planting and environment conservation has improved, increase in livestock and its trade, improved community mindset towards trade and farmers can now afford tractor hire to open huge chunks of land for agriculture. **District Production Officer, Amudat District**

There is a great improvement in food security because of improvement in production registered over years of NUSAF3 implementation. The provision of Oxen and Ox-ploughs has boosted the size of land cultivated for agricultural produce which has enhanced incomes at household levels. Communities have picked the culture of savings through participating in saving groups and small SACCOs. The payment extended to sub-projects in beneficiaries have helped them to save and it is gradually instilling a culture of savings among the NUSAF3 beneficiaries unlike other government projects. NUSAF3 projects have improved women's' livelihoods because of improved incomes since a number of households can now take their children to school which was not done before the introduction of the NUSAF3 projects. More women can now engage in market vending of food items which has improved on household income. Groups that received ox - ploughs and oxen could also hire out labour to open gardens for non-beneficiaries and earn money per acreage cultivated. Being in a group makes it easy for some individuals to access credit facilities from banks which is re-invested in other projects like building and construction that has created Jobs for other community groups. **RDC Adjuman District**

The information in spotlight 1 is some of the widespread evidence to show a positive trajectory in household and community resilience. In these excerpts one will see improving adaptive capacity, capacity to manage risks and development indicators. At the core lies the fact that enabling households to earn income and teaching them how to utilise this income is a precursor to transformative change at both household and community levels. The capacity building delivered through trainings, interactions and exposure of the poor households to better individuals (district officials, traders and suppliers) significantly improved mindset and attitudes towards work, money, savings and investment.

Qualitative evidence confirmed that a number of beneficiaries worked and built good houses made of bricks, cement and iron sheets as compared to grass thatched houses they lived in before participating in the project. They changed their attitude towards education for their children with beneficiaries arguing that **“we now know when we work and earn, we have to take our children to school.”** Investment in education is a strong development indicator, pointing towards building longterm resilience. Education improves one’s knowledge levels, skills and employment which can easily translate into income necessary to deal with shocks and vulnerabilities.

The Pokot people in Amudat engaged in large scale farming and growing of food, evidence of improving adaptive capacity. Time management was evident especially during the weekly savings, people started to bathe, wear clothes and attend meetings when they were decently clothed. This is development.

Unheard of prior to NUSAF3, the female members (from previously poor and very poor households) started taking up leadership roles in the church while others were contesting for local council elections. These were members of CPMC as chair persons, treasurers, LCI and LCII chairpersons as they were able to talk freely in public without fear. Widows who earned from group activities were making kitchen gardens to produce vegetables for their homes. This improved nutrition at home.

As part of enhanced resilience, roads were opened up like one in Kwowa, Amudat district after crossing the bridge and group members were actively involved in livestock business. **Karamoja area depended on livestock, but at the time of evaluation there was growing of maize which was sold in Soroti, Mbale, Kenya and South Sudan.** Many farms have been opened for intensive involvement in commercial agriculture, with one subcounty chief quoted as saying:

“Roads were opened like one in Kwowa after crossing the bridge and group members are

actively involved in cattle business. This area depended on livestock, but now there is growing of maize and some is sold to Soroti, Mbale, Kenya and South Sudan. Many farms have been opened for intensive involvement in agriculture”. **Subcounty Chief, Amudat District**

3.3 Descriptive statistics

As explained in chapter two, resilience was measured by creating an index that was composed of several variables. These include access to basic social services, ownership of productive assets, social safety nets and adaptive capacity. The descriptive statistics for each of these variables are provided in this sub-section. The descriptive statistics for ownership of productive assets are provided under the wealth index.

The Exploratory factor analysis for access to basic social services retained four factors. These included access to medical care, roadside market, access to clean water and livestock market. The results in table 4 indicate that there was improvement in access to these services between baseline and midline, and there was a decline thereafter except for access to livestock markets. Improved access to these services between baseline and midline was particularly driven by LIPW interventions of opening up access roads and improvement of water sources. The slight decline is indicative of the need to maintain these access roads as they were affected by the surface runoff from the heavy rains that fell throughout the year 2020. Maintenance is particularly important because, as seen in table 4, when access roads were improved, there was immediate improvement in access to basic social services. At the time, beneficiaries applauded the role of the access roads towards improving access to social services. One LIPW beneficiary from Lira had this to say at midline:

“Before NUSAF we had very many challenges... we could not even access health facilities easily. But now with the community access roads we can access health centers and even pay for medical bills with our savings.” Mary, Lira

Table 4: Access to Basic Social services

Wave	Medical care	Roadside market	Clean water	Livestock market
Baseline	1917	1787	3236	404
	35.00%	39.60%	59.10%	7.40%
Endline	1365	1261	2265	335
	39.00%	39.60%	63.90%	10.60%

Source: NUSAF primary data

The voices of the district technical teams on maintenance of access roads for improved social services have not changed since baseline. Their argument has always been that allocating 30% of LIPW to technical costs was insufficient because some parts of the roads clearly needed machinery, especially the wetlands and rocky hills. Indeed, rocky parts as well as wetlands were hard to work on and these quickly deteriorated because of reliance on manual labor for fixing them. This perhaps explains why some of the access roads could not continue serving the purpose they served at midline. Moreover, the beneficiaries did not appear to have interest in maintaining the community assets they had built. These are assets which were identified as critical for the communities and thus NUSAF3 helped in addressing the key binding constraints. Thus, maintenance should have come naturally after all 100% of the beneficiaries attested to benefiting from the newly (re)created community assets. Beneficiaries still had the tools but they were unwilling to step up and maintain the community assets. In part the failure to look after the assets can be attributed to the fact that these are communal assets and therefore no one takes individual responsibility. Such a problem is common with all public goods, suggesting that either the local or central government should finance their maintenance. Indeed, many stakeholders expected that part of the LIPW funding should have been for maintenance of the community assets. Discussions with the local governments revealed that many of the assets would be taken care of by the local governments. At midline, the CAO of Napak district affirmed the commitment of the district towards maintaining the community:

“These roads in the community under NUSAF, the sub county will take them on and upgrade them to another level even after the project. So, we have a mechanism for sustaining them” CAO.

However, his counterpart in Nwoya District expressed worry about the maintenance of these access roads, maintaining his midline position. He argued thus:

“For roads sustainability, we got roads under the NUSAF programs but for all the roads, maintenance has always been a problem especially because of the culture here where people do not always offer voluntary communal services for such projects...so there is a possibility that these roads will go back to the state where they were” CAO, Nwoya District.

These assertions help to shed light on why access to basic social services improved at midline but faced a slight decline at endline. This is likely to reflect on the rate at which community resilience improves. And if not addressed, it will significantly impact community resilience.

Social safety nets and adaptive capacity

It was also important to compute descriptive statistics for social safety nets and adaptive capacity. The EFA retained four factors including savings, financial transfers, income generating activities and education level of the household head. Unlike access to social services, the results in table 5 reveal that there was improvement on all these factors. Households with savings, a core safety net variable increased from 54.3% to 62.3%. Although nearly 40% of the households did not have savings, the increase in those with savings demonstrated a positive trajectory. Furthermore, households with income generating activities increased as well as those with formal financial transfers. Interestingly, the proportion of households with formal education slightly increased, reaching three quarters of all the households.

Table 5: Social safety nets and adaptive capacity

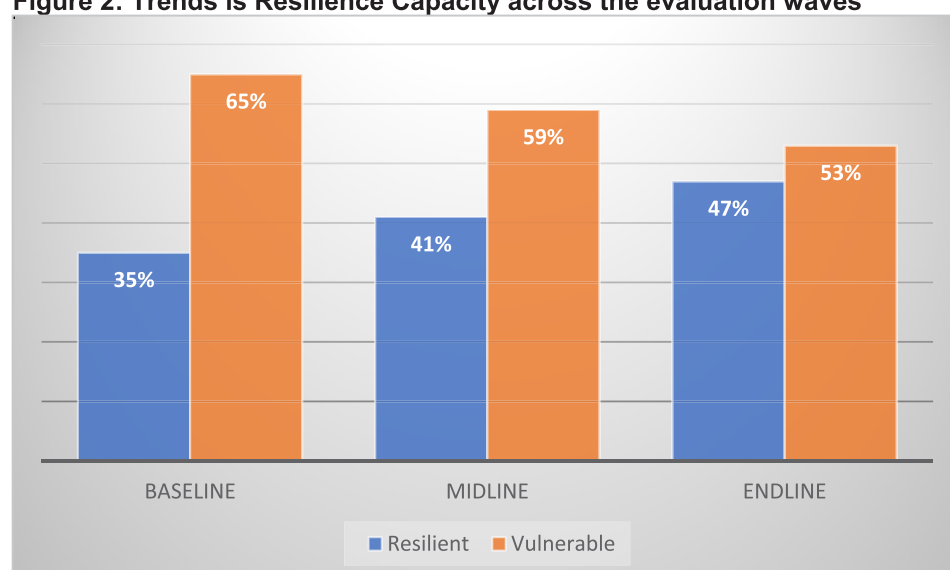
Wave	Have Saving	Made Formal transfers	Have income Generating activity	H'hold Head had formal education
Baseline	2974	163	2869	4079
	54.30%	3.00%	52.40%	74.50%
Midline	2053	120	2080	2995
	47.70%	2.80%	48.30%	69.60%
Endline	2228	144	2121	3014
	62.30%	3.40%	58.70%	75.30%

Source: NUSAF primary data

The descriptive statistics of the resilience factors suggest that overall, there was improvement in resilience. However, this can be best determined by computing the resilience capacity index.

3.4 Trends in Resilience Capacity of Households

The Food and Agriculture Organization of the United Nations' Resilience Index measurement and analysis was used⁸. Using the composite index, it is evident in figure 2 that overall, household resilience improved from 35% to 47% at endline. These changes remained consistent throughout the three evaluation waves. This suggests improved capacity of the project beneficiaries to cope with shocks and also adapt to changing circumstances. Clearly these results support the views of the local leaders, project implementers and the testimonies of the beneficiaries that are presented throughout this report. Such is evidence of good strides made towards achieving the PDO. Nevertheless, it should be noted that while improvement was achieved, more than half of the beneficiaries were still vulnerable to shocks. This statistic suggests that a large proportion of the beneficiaries still needed support, and this is understandable given that the project targeted the poorest of the poor Ugandans. Given the nature of the project beneficiaries, the poorest of the poor, the improvement in resilience was good. And from a statistical standpoint, the increase was significant ($t=2.6235$, $p<.05$). Overall, this implies positive increase in access to basic Social Services; ownership of productive assets; improved social safety nets; and adaptive capacity of the beneficiary households.

Figure 2: Trends in Resilience Capacity across the evaluation waves

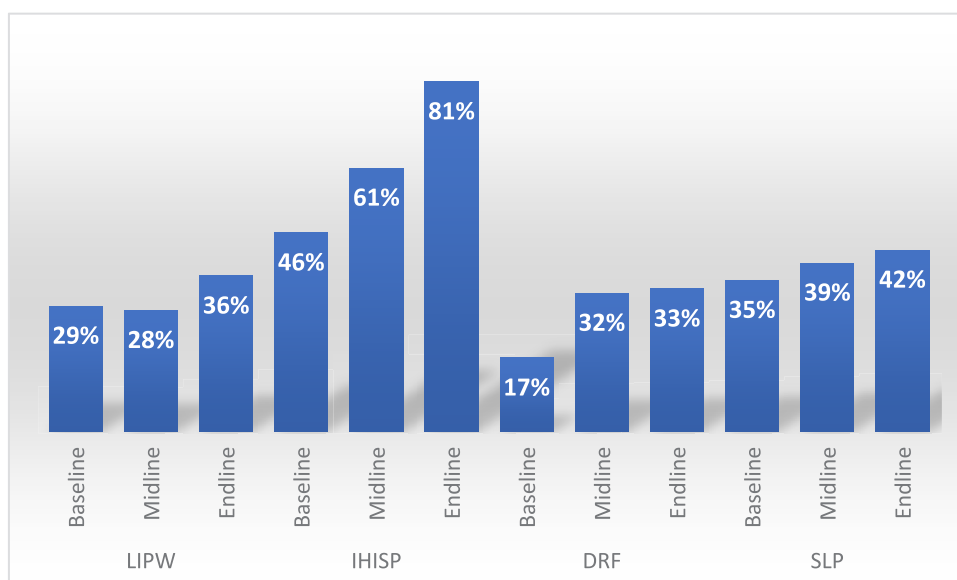
Source: NUSAF primary data

⁸ Analysing Resilience for better targeting and action: Food and Agriculture Organization of the United Nations Rome, 2016

At component level, it is evident in figure 3 that there was improvement in resilience among beneficiaries from all project components. However, greatest improvements were registered among IHISP beneficiaries, whose resilience capacity nearly doubled from 46% to 81% at endline. In terms of the indicators of resilience, this increase means that IHISP beneficiaries, more than beneficiaries of any other sub-component, enjoyed improved access to basic Social Services; ownership of productive assets; improved social safety nets; and adaptive capacity. This is especially understandable because these beneficiaries undertook business activities and were good beneficiaries of the community assets. Their enterprises afforded them income to access social services, to buy productive assets and to have savings – in any case, savings were at the heart of their group operations. Indeed, the IHISP beneficiaries registered the greatest reduction in vulnerability, falling from 54% at baseline to 19% at the endline.

Overall however, while improvements were observed among beneficiaries of LIPW, DRF and SLP, vulnerability levels were generally still high averaging above 58%. DRF beneficiaries remained the most vulnerable to shocks.

Figure 3: Resilience levels by Project Sub-component



Source: NUSAF primary data

Analysis of resilience levels at regional levels shows that with exception of Acholi, Bunyoro and Karamoja, all regions registered an improvement in household resilience (table 6). Big improvements were recorded in Bukedi, Elgon and West Nile sub-regions where the proportion of resilient households nearly doubled. These results indicate that in these regions, beneficiaries chose interventions that helped to improve access to social services. This is true especially when the map of community assets that were constructed is viewed. Furthermore, beneficiaries in these regions invested strongly in purchase of household assets, and trends in savings show a bias towards these regions.

However, in Bunyoro sub-region resilience capacity declined almost by 42% while the vulnerability level increased almost by 71%. These declines were particularly attributed to the effect of flooding among communities near Lake Albert as well as price fluctuations that occurred in 2018. The fluctuations reduced enterprise performance, and affected peoples' savings. Thus, differences in resilience levels were attributed to both natural and economic factors, and to some degree differences in people's abilities at a household level.

Table 6: Household Resilience Capacity of NUSAF3 beneficiaries by Region

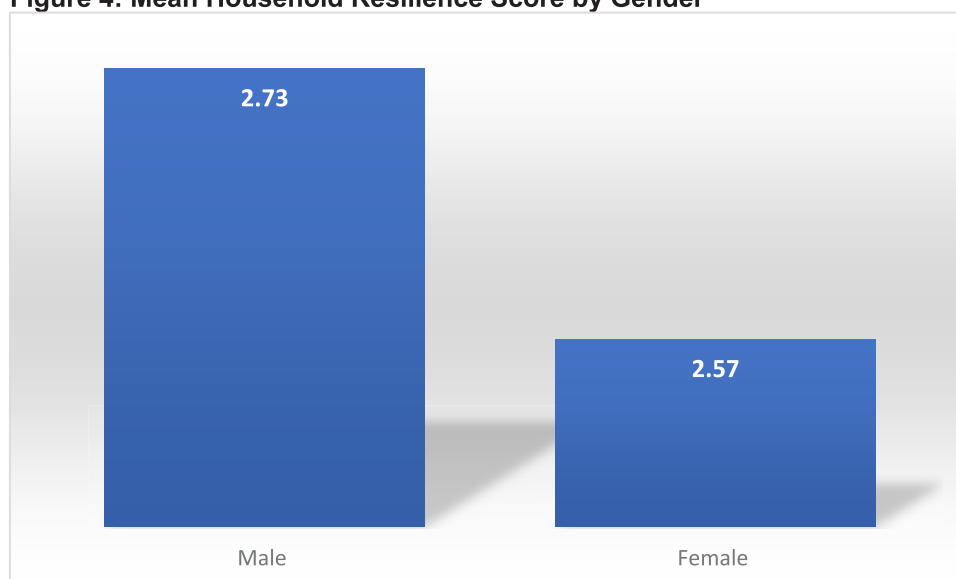
Sub-Region		Resilience Capacity Index		Total
		Resilient	Vulnerable	
Acholi	Baseline	272	226	498
		54.60%	45.40%	100.00%
	Midline	236	111	347
		68.00%	32.00%	100.00%
	Endline	436	384	820
		53.20%	46.80%	100.00%
Bukedi	Baseline	101	342	443
		22.80%	77.20%	100.00%
	Midline	44	281	325
		13.50%	86.50%	100.00%
	Endline	231	158	389
		59.40%	40.60%	100.00%
Bunyoro	Baseline	290	49	339
		85.50%	14.50%	100.00%
	Midline	213	25	238
		89.50%	10.50%	100.00%
	Endline	164	165	329
		49.80%	50.20%	100.00%
Elgon	Baseline	115	316	431
		26.70%	73.30%	100.00%
	Midline	172	219	391
		44.00%	56.00%	100.00%
	Endline	242	166	408
		59.30%	40.70%	100.00%
Karamoja	Baseline	578	1135	1713
		33.70%	66.30%	100.00%
	Midline	393	579	972
		40.40%	59.60%	100.00%
	Endline	218	471	689
		31.60%	68.40%	100.00%
Lango	Baseline	344	540	884
		38.90%	61.10%	100.00%
	Midline	197	111	308
		64.00%	36.00%	100.00%
	Endline	230	154	384
		59.90%	40.10%	100.00%

Sub-Region		Resilience Capacity Index		Total
		Resilient	Vulnerable	
Teso	Baseline	122	454	576
		21.20%	78.80%	100.00%
	Midline	199	384	583
		34.10%	65.90%	100.00%
	Endline	207	328	535
		38.70%	61.30%	100.00%
West Nile	Baseline	85	506	591
		14.40%	85.60%	100.00%
	Midline	322	819	1141
		28.20%	71.80%	100.00%
	Endline	270	406	676
		39.90%	60.10%	100.00%

Source: NUSAF primary data

As shown in figure 4, male beneficiaries exhibited higher resilience levels than their female counterparts, and this difference was statistically significant ($t=16.195$, $p<.05$). The average resilience score for male headed households was 2.73 while that of female headed households was 2.57. These differences were expected especially given that culture has traditionally placed women in weaker positions in regard to resource ownership and access to opportunities. However, it is worth emphasising that female headed households demonstrated improved resilience relative to the baseline position.

Figure 4: Mean Household Resilience Score by Gender



Source: NUSAF primary data

With regard to resilience by level of education of the beneficiaries, there was a significant difference in the levels of resilience among beneficiaries with formal education and those without it ($t = 1.1819$, $p<.05$). The average resilience capacity score for beneficiaries without formal education was 2.65 while that of those with formal education was 2.70. Further disaggregation showed that the higher the level of education was the higher the likelihood of improved resilience. Overall, educated household beneficiaries were likely to be more resilient than their less educated counterparts.

3.5 Econometric Results

Econometric model misspecification was also tested based on a comparison of two different estimators of the model parameters for the panel data. The estimators compared should exhibit the properties that (i) under the null hypothesis of correct model specification both estimators are consistent for the “true parameters” of the model (those corresponding to the data generating process), whereas (ii) under misspecification (the alternative hypothesis) the estimators should have differing probability limits. The selected Hausman test evaluated panel model estimated with fixed effects versus random effects. Following the results from the Hausman test (Table 7), was failed to rejected the null hypothesis that the Random Effects model was appropriate suggesting that the differences between the FE model and the RE model were not systematic. Therefore, Random effects model was appropriate based on the insignificant p-value (0.9948).

Table 7: Hausman Test for model appropriateness

Variable	Resilience Capacity Scores
Hypothesis	Ho: Difference in coefficients not systematic
Chi2(7)	1.000
Prob > chi2	0.9948

Source: NUSAF primary data

3.5.1 Breusch and Pagan Lagrangian multiplier (LM) test for random effects

The selected random effects model was further examined with the use of Breusch and Pagan Lagrangian multiplier (LM) test to test whether Pooled OLS regression was the appropriate model to apply for analysis (Table 8).

Table 8: Breusch and Pagan Lagrangian Multiplier test for Random Effects results

	Variance	Sd=sqrt(Variance)
Resilience capacity scores	.35215	.59343
e	.24844	.49844
u	0	0
Test: Null hypothesis: Var(u)		
= 0 Chi²(01)=0.00		
Prob > chi2=1.0000		

Source: NUSAF primary data

Based on the probability value ($p = 1.000$) of the Chi-square, Breusch and Pagan Lagrangian Multiplier (LM) test for random effects results failed to reject the null hypothesis that the Pooled OLS model was appropriate. The recommended pooled Ordinary Least Squares model was further examined for heteroscedasticity (Table 9).

Table 9: Detection of heteroscedasticity problem

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity	
Variable	Resilience Capacity Index
Hypothesis	Ho: Constant variance
Chi²(1)	1317.39
Prob > chi2	0.000

Source: NUSAF Primary data, 2020

Based on the probability value ($p = 0.000$) of the Chi-square, the null hypothesis at 1 percent level of significance was rejected, concluding that heteroscedasticity is present. Due to presence of heteroscedasticity, the results obtained through significant tests could be invalid and inaccurate. To minimize the problem of heteroscedasticity, we estimated the pooled OLS models with robust standard errors as deemed suitable in empirical studies⁹.

3.5.2 Model estimation for NUSAF Impact on Household Resilience Capacity Scores Pooled OLS Regression Model

Table 10: Estimation for NUSAF Impact on Household Resilience Capacity Scores Using Pooled OLS Regression Model

Variable (Resilience scores)	Capacity Coefficient	Robust Standard error	P> z
Gender (1=male)	-.049	.010	0.000
NUSAF Sub component			
IHISP	.193	.011	0.000
DRF	.290	.014	0.000
SLP	.071	.015	0.000
Household wealth	.518	.012	0.000
Food consumption	.007	.007	0.283
Enterprise growth	.002	.001	0.039
Constant	1.624	.027	0.000
Number of observations		12,766	
R-squared		0.2949	
Root MSE		.49842	
F(7, 12758)		513.33 (0.000)	

Source: NUSAF Primary data

It is evident from the results in table 10 that beneficiary gender, NUSAF sub-components, household wealth, food consumption and household enterprise growth accounted for 29.5% of the variance in household resilience (R-squared, 29.49). Although all these variables contributed to the resilience of households, household wealth made the biggest contribution, accounting for 51.8% influence in household resilience. Furthermore, household enterprise growth was found to have a positive and significant influence on household resilience. A one unit change in enterprise growth would lead to a 0.2% change in household resilience. This suggests that growth in household income generating enterprises translates into increased household resilience holding other factors constant. However, food consumption was not a significant predictor of household resilience.

The coefficient of gender was found to be negative and significant implying that male beneficiaries were 4.9 percent less likely to be resilient compared to their female counterparts holding other factors constant. This in particular is attributed to the fact that it's women who engaged more in savings, they invested in productive assets while their counterparts spent their earnings mostly on consumptive activities. Qualitative evidence showed that women tended to be more intentional in their savings and investments than men, in part because the project gave them a rare opportunity to earn an income. The findings further reveal that household beneficiaries belonging to LIS, DRF and SLP were more likely to be resilient compared to household LIPW beneficiaries. This in part is because these project components served as avenues for income, savings and food security improvement. This contribution matches with the expectations set in the project theory of change.

⁹ Munyaradzi, E. G (2014). Education and Economic Growth Nexus in Sub Saharan Africa. International Journal of Economics, Commerce and Management. Vol II, Issue 6.



Chapter Four //

Household welfare and progress out of poverty



4.1 Introduction

This chapter contains findings on the impact of NUSAF3 on household asset accumulation, welfare and progress out of poverty. Assets constitute the building blocks of household welfare. Therefore, this chapter analyses the impact of NUSAF3 on asset accumulation from both a qualitative and quantitative perspectives. The chapter further assesses how well the project contributed to progress out of poverty using carefully developed econometric models.

4.2 Contribution to household assets

The evaluation team established that NUSAF3 supported poor and vulnerable people to acquire assets which they used to address issues of production, food security, health, education and overall welfare. NUSAF3 beneficiaries acquired several productive and non-productive assets including livestock (Goats, cows, chicken and sheep), land, motor cycles, bicycles, oxen, ploughs, smart phones, solar panels, TV sets, fridges and grain mills. The beneficiaries further bought non-productive assets such as mattresses, solar panels, radios, kitchen ware, blankets and cloths among others. These assets helped the beneficiaries to improve the quality of life as they earned income and lived a better life. An excited female youth in Amudat revealed that before NUSAF3, she used to sleep on a cow skin but the project gave her income which she used to buy bed sheets and a mattress. The young lady further started to engage in selling of goats to earn regular income. The example of the members of Oloro I Otraction for Soya Beans and Maize Production in Lira District (spotlight 2) demonstrates improved acquisition of household assets among several beneficiaries of NUSAF3.

It is evident in the example that the project elevated people from nothing to acquisition of varieties of assets including cash and savings. These assets play important roles in the lives of the beneficiaries, helping to address issues of production, food security, health, education and overall welfare. Our belief is that earning of income remains an important part in supporting beneficiaries to acquire assets, further supporting the conceptualisation in the project theory of change, as well as the econometric models.

NUSAF3 further supported in the growth of human assets. Households take their children to school and parents can now afford school requirements like uniforms, scholastic materials and paying school fees. As a result, children have been enlightened and help their parents with reading, writing and counting at home. Adults have also been trained in savings management, improved agricultural practices, group dynamics and tree planting. With trainings in agriculture and back yard farming, back yard gardens have been established which has improved household nutrition and reduced malnutrition.



Livestock is one of the major assets invested in by NUSAF3 beneficiaries



Spotlight 2: Asset building among IHISP members from Oloro | Ostraction for Soya Beans and Maize Production, Lira District

Our community was faced with so many challenges mainly because of low or no income to support our livelihood. Our enterprise started with the support of NUSAF3 in 2017. When NUSAF3 intervened, our livelihood changed positively. We can now meet most of our household needs. The project comprises of 22 members (14 females and 8 males). We initially majorly dealt in soya bean growing but extended to maize, sun flower growing and bee keeping but also deal in produce buying and selling. At start each of us was offered an ox and a plough. We do group and individual farming. The intervention provided each of us with ox plough, an ox and improved seeds of soya bean and maize. We were given some training on how to use the inputs and we started crop production. Amazingly the season's output was quite good. This gave our group a lot hope and confidence. The bee keeping that is managed on group basis is housed on approximately 2-acre land has 28 hives. The bee keeping enterprise has really boosted our livelihood through income generation. We started with a capital base of approximately UGX4 million but stand at a net value of approximately 30million shillings now. We now have 50 bee hives as a group but individually almost all members own a complete set of ox-plough (pair of oxen and plough).

Our members have constructed better houses, bought cows, goats, sheep, some have solar panels and television sets, radios, cellphones. We have changed to a better state of increased access to food due to compound and block gardens. We are able to pay fees for our children and buy them books, pencils and pens. We buy and wear better clothing which have improved our appearance and sanitation. We are able to save from our earnings and household items like sauce pans, mattresses, bed sheets etc. We do business in produce and livestock. Many of the members have built permanent houses, own other assets like solar, ploughs, goats, cows, pigs, rabbits and sheep, chicken, ducks; most members can produce food or consumption and surplus for sale; they can have at least two or three meals that are fairly balanced since they can afford. Household incomes' have improved from assets and investments in mostly petty business like road side stalls. Most ploughs and oxen are hired out at a price. Women are encouraged to be part of subproject or enterprise management committees and they have acquired some degree of economic and leadership empowerment as a result of involving themselves in NUSAF3 activities. Social capital has been observed in the level of team work and improved social relations that are evident in and among project or/and community members. Household health has improved because the community members are able afford basic treatment.

4.3 Results on Household welfare from the qualitative study

NUSAF3 created employment opportunities which allowed beneficiaries to earn income and make savings which they used to improve household welfare. As shown in the preceding section, beneficiaries acquired assets which they used to improve feeding, clothing, medication, education and housing conditions. The project gave hope and reassurance to the vulnerable beneficiaries who had lost hope in life. The evaluation team established that many beneficiaries were engaging in activities which were helping them to progress out of poverty. Beneficiaries constructed drying racks and pit latrines leading to better hygiene and sanitation. There was also investment in productive assets such as oxen, ox-ploughs, bicycles, land, business enterprises and livestock. These assets helped people to earn income and improve their household welfare. The case of Adyero Poline from Pader district is an example of many beneficiaries that were on their way to better welfare and prosperity courtesy of NUSAF3.



NUSAF3 Gave Hope to Thousands of Young Women



Spotlight 3: Poline, a NUSAF3 beneficiary on a positive prosperity trajectory

Adyero Poline was a 35-year-old female living in **Acholibur in Pader district**. She lived a life of a poor subsistence farmer, trapped in poverty and an endless state of hopelessness. In 2018 she was selected by the LC1 chairman to be part of an IHISP group. She received training and seed capital of 60 kgs of soyabean for planting, an ox, a plough and medicine for the ox. At her first harvest, she got 9 bags of soyabean which she sold for UGX 1,000,000. She used part of the money to buy a cow and to pay fees for her three children. She used some of the money (UGX 200,000) to start a restaurant business. In the second year of cultivating her garden, she harvested 12 bags of ground nuts, sold 10 and got UGX 1,200,000. She also cultivated simsim and got UGX 300,000. From her restaurant, she earns about UGX 300,000 in profit per month. She continued using her ox to cultivate other people's gardens, earning UGX 500,000 per year. She has been able to afford a TV set at home. She bought a sofa set, pays school fees for her children, prepares her gardens and plants in time, feeds the family with ease and takes care of any medical condition for her family members. She plans to buy land and build a house in her name and educate her children all the way to the end. In her own words, "life is okay in the home; I do give my husband all the respect even if he doesn't really make any real contribution".

Trainings improved social relationships between and among people and reduced GBV at household levels. Alcoholism among group members also reduced with all its associated defects while the saving culture improved the level of responsibility and cooperation. There was reduced domestic violence at household level resulting from high level of sensitization on gender issues in communities which changed attitude of men towards their wives. Women were no longer looked at as property, but rather as companions and partners. The Community Development Officer of Nebbi district emphasised that “beneficiaries were sensitised and the community was supported to give women respect, leading to reduced gender-based violence.” The CDO emphasised that through the training received as part of the project, couples learned how to settle issues through dialogue. As an example, the District Implementation Support Team of Kapchorwa noted that domestic relations improved with women milking cows. In Chebonet watershed, women milked cows and people were happy, helping to build peace in homes and communities. Domestic relations were boosted by the fact that women made tremendous contribution towards household requirements using part of their income from public works and savings. This created emotional stability in homes thereby allowing household members to build their wealth base together.

4.4 Descriptive statistics

In order to have a better understanding of the wealth of beneficiary households, a wealth index was created. As a measure of household welfare, the index was composed of a number of assets that households possessed. As seen in table 11, there was increase in ownership of household assets across the three waves. A look at the “N” shows that with the exception of sheep, the number of households owning assets significantly increased between baseline and endline. Majority of these assets were productive assets, implying that households were more likely to generate income from these assets. Good examples of increased were in livestock, where on average a household owned 4 cows, up from 2.9. The number of goats owned increased from 3.2 to 4.9 while poultry (chicken ducks and turkeys) increased from an average of 5.5 per household to 17.02. it is evident that more households acquired bicycles, motorcycles and telephone handsets.

Table 11: Trends in ownership of household assets

		N	Mean	Std. Dev.	Min	Max
Radio	Baseline	691	1.05	0.265	0	3
	Midline	618	1.06	0.34	0	4
	Endline	1532	1.05	0.345	1	9
Motorcycle	Baseline	67	1.0	0.00	1	1
	Midline	70	1.0	0.17	0	2
	Endline	274	1.07	0.547	1	9
Bicycle	Baseline	570	1.07	0.284	0	3
	Midline	486	1.06	0.299	0	3
	Endline	1139	1.09	0.405	1	9
Telephone (handset)	Baseline	1020	1.45	0.826	0	8
	Midline	886	1.4	0.821	0	13
	Endline	2273	1.6	1.003	1	10
Livestock (cows)	Baseline	583	2.87	3.143	0	40
	Midline	745	1.25	0.7	0	8
	Endline	1635	3.95	6.288	1	80

Livestock (goats)	Baseline	785	3.24	3.389	0	50
	Midline	939	1.35	0.792	0	7
	Endline	1798	4.92	8.083	1	150
Livestock (sheep)	Baseline	200	2.87	2.992	0	30
	Midline	1156	3.53	2.252	0	28
	Endline	296	4.13	5.097	1	50
Poultry	Baseline	1104	5.52	5.706	0	74
	Midline	919	1.47	0.906	0	7
	Endline	2529	17.02	6.051	1	115

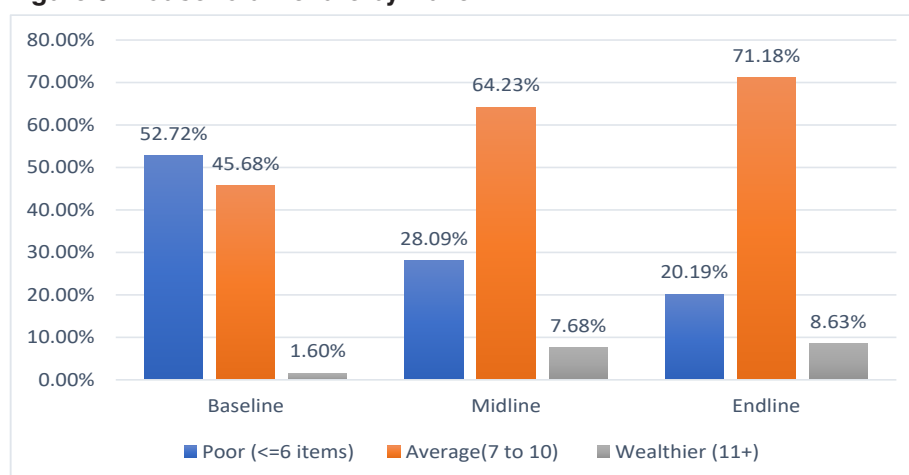
Source: NUSAF primary data

4.5 Trends in Household Welfare

The statistical evidence in figure 5 shows that the welfare of the beneficiaries improved with those considered poor falling from 52.7% at baseline to 20.2% at endline. At baseline, the beneficiaries who were considered average (neither rich nor poor) increased from 45.7% to 71.2% while those considered wealthy increased from a mere 1.6% to 8.6%. Econometric modelling indicated that these improvements in household welfare were statistically significant ($t=19.629$, $p<.05$). NUSAF3 takes credit for improving household welfare. Growth in wealth suggests improved household consumption and savings as well as good living conditions. This is corroborated by qualitative evidence in spotlights 4 and 5. This evidence reveals that many beneficiaries were able to take their children to school and pay medical bills in case a household member fell sick.

It is expected that changing wealth status shall further impact health of beneficiaries. This is because the higher one's wealth status, the lower one's likelihood of disease and premature death (Schiller, 2012). Existing empirical evidence suggests that improved wealth status eliminates many poverty related disease burdens and increases longevity among the adult beneficiaries and reduces infant mortality. Gradual advance in wealth status improves consumption and access to basic needs at household level. These benefits are expected over the long term among NUSAF3 beneficiaries in part because this study shows good progress in welfare of beneficiaries over the last five years.

Figure 5: Household welfare by wave



Source: NUSAF primary data

Among the DRF beneficiaries, households considered poor reduced by more than half from nearly 100% to 45% while those considered average increased from 0.35% to 52.9% at endline. Such a trend in wealth status implies that there was considerable acquisition of household productive assets among DRF beneficiaries. Such acquisition meant that majority of them were no longer perceived as very poor. However, a considerable 45% still remained trapped in state of poverty, nearly owning no assets. As with DRF, LIPW beneficiaries considered classified as poor fell from 92% to 17% and the reduction was consistent throughout the evaluation waves. In fact, up to 5.8% of the LIPW households were classified as wealthier, rising from 0% at baseline. Overall, the least poor beneficiaries were those belong to SLP sub-component, and among these, the wealthier ones increased from 27% to 47%. These households were considered as active poor, and evidence elsewhere shows that the SLP beneficiaries ran quite successful enterprises.

Among the IHISP beneficiaries only 3.7% were regarded as wealthier at baseline but the proportion increased to 9.3% at endline. In this category of beneficiaries, the poor ones increased from 0% to 12%, and the average households attained a moderate improvement. In part, this trend is explained by challenges that were associated with enterprise start up and management. There were significant issues of market access and value addition. NUSAF3 succeeded in supporting formation of groups and transforming these into productive enterprises but success was only for the more entrepreneurial and aggressive groups able to overcome environment of business challenges. A number of these groups produced massively but when faced with market challenges, they could not add value to their produce (e.g. cassava) and be able to store their products until prices improved. The structure of the project should have supported transition of these IHISP groups into cooperatives to be able to benefit from collective bargaining for both financing (for investment in machinery) and better prices in the markets. With these challenges, it was expected that the welfare of IHISP beneficiaries would be modest – indeed, some 12% of them became poorer, losing vital productive assets.

Table 12: Household Welfare by component

Evaluation waves	Poor (<=6 items)	Average (7 to 10)	Wealthier (11+)	Grand Total
DRF				
Baseline	99.65%	0.35%	0.00%	100.00%
Midline	58.82%	41.18%	0.00%	100.00%
Endline	45.13%	52.88%	1.99%	100.00%
IHISP				
Baseline	0.00%	96.35%	3.65%	100.00%
Midline	0.00%	80.74%	19.26%	100.00%
Endline	11.91%	78.75%	9.34%	100.00%
LIPW				
Baseline	92.18%	7.82%	0.00%	100.00%
Midline	40.17%	59.34%	0.49%	100.00%
Endline	17.41%	76.83%	5.76%	100.00%
SLP				
Baseline	7.80%	65.60%	26.60%	100.00%
Midline	9.70%	59.90%	30.40%	100.00%
Endline	5.20%	49.30%	45.60%	100.00%

Source: NUSAF primary data

NUSAF women beneficiaries were found to be wealthier than their male counterparts over the project period and the difference was statistically significant ($t = 30.9935$, $p < .05$). These results speak a lot about the role that NUSAF3 played in empowering women. The project gave women an opportunity to make an economic contribution to both society and their households. As a result, they invested in several assets and improved welfare at both personal and household level.

4.6 Econometric results

Table 13: Estimation of NUSAF3 Impact on Household Welfare Using Fixed Effects Model

	Coefficient	Bootstrap Standard error	P> z
NUSAF Sub component			
LIPW	.456	.161	0.005
LIS	1.516	.316	0.000
DRF	.393	.269	0.144
Household commercialization	-.089	.077	0.252
Household size	.079	.038	0.039
Poverty Progression	.066	.012	0.000
Resilience Capacity	4.616	.711	0.000
Constant	-1.500	.653	0.022
sigma_u		.293	
sigma_e		2.227	
Rho		.017	
Number of observations		12,766	
Number of groups		3	
R-squared			
Within		0.2306	
Between		0.3883	
Overall		0.2277	
Wald chi2(7)		613394 (0.000)	

Source: NUSAF Primary data **Note:** sigma_u = standard deviation of residuals within groups ui; sigma_e = standard deviation of residuals (overall error term) ei; rho' is known as the intraclass correlation.

NUSAF sub-components, household commercialization (ratio of household produce sold in the food market), household size, poverty progression and resilience capacity accounted for up to 22.8% of the variation in household welfare (table 13). The interclass correlation shows that nearly 1.7 percent of the variance was due to differences across panels. Therefore, these variables were able to contribute to improvement in household welfare over time. With NUSAF intervention, the findings indicate that LIPW, LIS and DRF beneficiaries were 45.6%, 152%, and 39.3% more likely to be wealthier than SLP beneficiaries. Additionally, household size had a positive and significant impact on household wealth suggesting that an additional member in the household was associated with increased household wealth by 7.9 percent holding other factors constant. To shed more light on this, the project afforded more beneficiaries for households which had more than five members. Thus, the bigger the household, the bigger the number of beneficiaries and therefore the wealth they contributed to the household. This explains why household size was significantly related to household wealth.

Relatedly, the coefficient of household resilience capacity was found to be positive and significant suggesting that when household resilience increases by one unit, household wealth increases 4.6 times holding other factors constant. While household wealth predicted resilience capacity, the reverse was also true. In essence, households that were resilient from the point of having access to social safety nets, improved adaptive capacity and had access to basic social services were more likely to accumulate. And accumulation of wealth in turn made these households more resilient to shocks.

The coefficient of poverty progression was found to be statistically significant suggesting that improvements in poverty rates translate into increases in household wealth by 6.6 percent holding other factors constant. This result further implies that as the household progresses out of poverty, its wealth increases as the household accumulates more assets indicating that small changes in the poverty reductions have large and positive effects on household incomes and wealth. Thus whereas the wealth index was helpful in determining the economic progress of the beneficiaries, the index helped to shed light on the poverty status of the households.

However, the evaluation team further computed the progress out of index to determine how well the beneficiaries were progressing out of poverty. This was to confirm whether there was progress, and determine if it was this progress that was correlated with household welfare.

4.7 Progress out of poverty

Whereas the wealth index was used to measure poverty levels, the evaluation team also computed the progress out of poverty index to determine the extent to which the beneficiaries were progressing out of extreme poverty. The index relied on ten items that have been defined as key indicators of poverty. The descriptive statistics for these items are presented in table 14. It is evident that there was improvement on all indicators. For instance, ownership of mobile phones increased from an average of 1.6 phones per household to 2.0. This means that over time, households had the opportunity to tap into benefits created by mobile phones. Some of these include easy communication, access to market information, and getting ability to do mobile money transactions.

As with mobile phones, the proportion of households owning radios doubled from 22% to 44%, again suggesting improved access to information. However, note should be made that while there was increase in ownership of radios, overall, about 56% of beneficiary households did not own radios. This has important implications on which channels to use when mobilising and communicating to people in the future.

Ownership of shoes among beneficiaries also increased from 41.8% to 52% although nearly half of all beneficiaries lived without a single pair of shoes. This finding is interesting especially given that household incomes and welfare improved. It appears that ownership of shoes was largely for the adults, with children largely going barefooted. Furthermore, between baseline and midline, school attendance increased but declined at endline. In part this was because of the impact of COVID-19 which caused lockdown of schools. As a result of this lockdown, fewer children had a limited chance of going back to school, especially for the girl child due to early marriages and pregnancies.

Although there was an increase in the proportion of households using better materials for building walls of their houses, overall people slept in houses built with mud (77.8%). Majority of these houses were roofed with thatch (76%) and use of this roofing material increased from 64.4% at baseline. These results imply that there was limited adoption of better building materials, in part because the project did not pay particular attention to this issue. Clearly, more people attempted to build houses but these were largely traditional structures that do not indicate progress out of poverty as measured by PPI.

Overall, while there were households with pit latrines, it is evident from table 14 that there was an improvement in toilet facility ownership and use, with those using uncovered pit latrines increasing from 27% to nearly 40%. More worrying is that up to 39% of households did not own latrines, although the percentage dropped from 53% at baseline. The implication of these findings is that in future programming, attention to these ten indicators should be one of the core principles of project implementation. This way, it will be possible to elevate people out of poverty through deliberate measures to address the poverty indicators.

Table 14: Descriptive statistics for indicators of poverty measured by PPI

	Baseline	Midline	Endline
Average number of people in household	6.49	6.66	7.12
Average number of mobile phones owned by household	1.60	1.54	1.99

Proportion of households that own a radio	22.0%	22.1%	44.2%
Every member of household having at least one pair of shoes	41.8%	40.7%	52.0%
H'hold Members aged 6 to 12 yrs. in school	30.90%	49.70%	29.10%
No oldest female can read and write	14.30%	13.30%	28.00%
Wall Material			
Unburnt bricks with cement, wood, tin/iron sheets, concrete/stones, burnt stabilized bricks, or cement blocks	17.10%	17.00%	22.20%
Unburnt bricks with mud, mud and poles, or other	82.90%	83.00%	77.80%
Roof Material			
Iron sheets, concrete, tiles, asbestos, or other	35.60%	31.50%	24.00%
Thatch, or tins	64.40%	68.50%	76.00%
Energy Source			
Charcoal, paraffin stove, gas, biogas, electricity (regardless of source), or other	19.50%	9.00%	18.60%
Firewood, cow dung, or grass (reeds)	80.50%	91.00%	81.40%
Toilet Facility			
Covered pit latrine with slab	19.50%	16.30%	20.50%
No facility/bush/polythene bags/bucket/etc., or other	53.30%	58.30%	39.10%
Uncovered pit latrine (with or without slab), Ecosan (compost toilet), or covered pit latrine without slab	27.10%	25.30%	39.60%
VIP latrine, or flush toilet VIP latrine, or flush toilet	0.10%	0.10%	0.80%

Source: NUSAF Primary data

The above indicators were used to compute the progress out of poverty index. The index ranges from 0 – 100 with 0 reflecting extreme poverty and 100 reflecting extreme prosperity. In the lookup table for the index, the evaluation team used the poverty threshold of US\$1.25/day. **See appendix 1 for details.** The results shown in table 15 show that the proportion of NUSAF3 beneficiaries trapped in Poverty at the beginning of the Project were around 63.5% while by the end of the project only around 45.3% were still regarded poor. Given the trends observed in the results in table 14, this reduction signifies improvement. It further supports the results observed on household resilience and welfare – there was good progress made by NUSAF3 beneficiaries. Above all, the beneficiaries of SLP were able to reduce poverty from 27.9% to 10.9%. From a targeting perspective, these results show that SLP beneficiaries were generally better than beneficiaries for all the other components.

Table 15: Poverty Progression Index by Wave of Evaluation

Component	Baseline	Midline	Endline
DRF	76.0% (10)	76.0% (10)	58.4% (21)
IHISP	65.3% (17)	65.3% (18)	45.3% (26)
LIPW	76.0% (13)	76.0% (12)	58.4% (21)
SLP	27.9% (30)	20.1% (42)	10.9% (45)
Grand Total	65.3% (18)	58.4% (20)	45.3% (29)

Source: NUSAF primary data

Beneficiaries from all of the components experienced significant progress out of poverty by registering over 40% progress. It was noted that close to 80% of the SLP beneficiaries had progressed out poverty unlike the DRF and LIPW where more than 40% were still trapped in poverty despite the NUSAF3 intervention. As already indicated in the previous sections, SLP beneficiaries were not as poor as beneficiaries of all the other components – and they still registered good progress out of poverty.

The sub-region Dimensions clearly indicated that NUSAF3 supported a number of households to get out of poverty (table 16). Before the project started, in Bukedi, Bunyoro, and Elgon, 76% of their beneficiaries were severely poor and miserable of which by the time the Endline Evaluation was conducted the figures had fallen to 58.4%.

Significant progression was however, reported in Acholi, Teso and West Nile where the percentage of poor beneficiaries fell more than half the figures at baseline that is from 65.3% to 23.9%, 58.4% to 23.9% and 65.3% to 23.9% respectively. It was Bunyoro Sub-region that had the highest proportion of poor beneficiaries. Interestingly, poverty levels among beneficiaries in Lango did not change although qualitative evidence showed that this region produced some of the most successful beneficiaries. It appears that while there were key successes in the region, overall, many beneficiaries were unable to alleviate poverty from their households.

Table 16: Household Poverty Progression by Wave of Evaluation and Sub-region

Sub region	Baseline	Midline	Endline
Acholi	65.3%(16)	65.3%(19)	23.9%(36)
Bukedi	76.0%(12)	65.3%(17)	58.4%(25)
Bunyoro	76.0%(10)	76.0%(10)	65.3%(15)
Elgon	76.0%(13)	76.0%(11)	58.4%(21)
Karamoja	65.3%(17)	76.0%(10)	58.4%(23)
Lango	58.4%(24)	76.0%(11)	58.4%(23)
Teso	58.4%(23)	27.9%(30)	23.9%(37)
West Nile	65.3%(19)	27.9%(33)	23.9%(38)
Grand Total	65.3%(18)	58.4%(20)	45.3%(29)

Source: NUSAF primary data

The findings in Table 17 further reveal that household income, access to community services, food consumption and enterprise development were the key drivers of poverty reduction. From this analysis, it is evident that a focus on building household income, community assets and enterprise development can help households improve their prosperity. Of most importance is the need to increase household income and enterprise development as these positively impact household progress out of poverty. It emerges from this evaluation that LIPW, IHISP and DRF beneficiaries were more likely to have reduced poverty rates than SLP beneficiaries.

Table 17: Estimation of NUSAF3 Impact on Poverty progression

Variable (Poverty Progression)	Coefficient	Standard error	P> z
NUSAF Sub-components			
LIPW	-1.223	.0027	0.000
IHISP	-.667	.027	0.000
DRF	-.657	.033	0.000
Access community services	-.018	.009	0.045
Average monthly household income	.013	.002	0.000
Food consumption scores	-.045	.014	0.001
Household enterprise development	.003	.002	0.081
Constant	3.338	.046	0.000
sigma_u		.050	
sigma_e		1.041	

Rho	.002
Number of observations	13,767
Number of groups	3
R-squared	
Within	0.1720
Between	0.8799
Overall	0.1715
Wald chi2(7)	408.32 (0.000)

Source: NUSAF Primary data

The results in table 17 further reveal that when household food consumption increases by one unit, poverty rates reduce by 0.05 percent holding other factors constant. This in part is because food lies at the core of human existence. Therefore, increase in food consumption is related to reduced poverty levels – which indirectly implies the efforts to increase consumption of food reduce overall household poverty. Similarly, a one-kilometre increase in access to community services reduces poverty rates by 0.2 percent holding other factors constant. Thus, investment in access roads is a key driver of household poverty.



Chapter Five //

Impact on access to and use of community infrastructure



5.1 Introduction

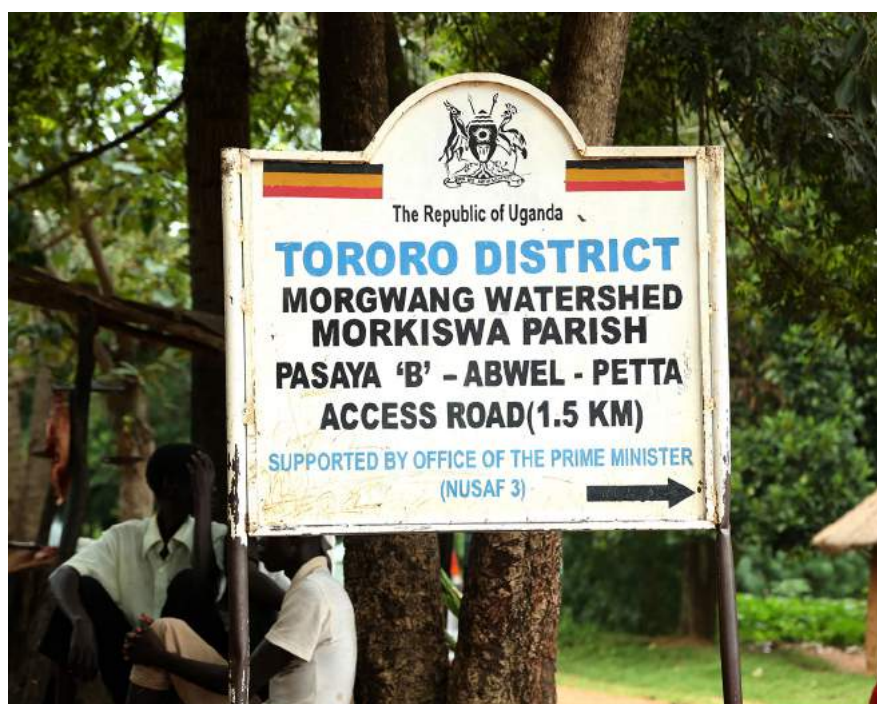
Community assets play an important role in improving livelihoods of people. NUSAF3 made significant investment improving community assets. It is thus important to assess whether this investment has had an impact on both access and use of these assets. This chapter takes both qualitative and quantitative approaches in making this assessment.

5.2 Qualitative Findings

The evaluation team established that in all the subregions, a good number of community access roads were opened under LIPW and DRF. These roads being deep in the villages are used by both the NUSAF3 beneficiaries and non-beneficiaries to access social services like health facilities, schools and markets among others. Because of the easy accessibility, there has been great improvement in the households as many can now reach health facilities faster hence improved health conditions. The farmers are able to take some of their produce to markets where they can now bargain and get a better price for their produce unlike before. The beneficiaries that participated in opening of these roads were allowed to keep the road construction equipment like the hoes and pangas which they can use in clearing their gardens.

The community access roads contributed to boosting of trade, helping poor communities

to access better markets and earning better prices from their produce. This was evident in Karenga (formerly part of Kaabong district) where a community access road helped to open up a livestock market that had collapsed many years ago. With the new market, local people found buyers for their products but they also got the opportunity to buy a number of household items on market days. Another good example of how access to and use of community infrastructure impacted lives of people was found in Tororo District where a 1.5km Payasa A – Abwel – Petta access road was opened. This access road reduced transport fares to the market from UGX3000 to less than UGX1000 for not only NUSAF3 beneficiaries but whole communities. Because the road was better, traders from distant places managed to collect cassava and other produce from the local communities at good prices. The IHISP group (Pasaya B maize millers) started receiving clients from several surrounding villages through the access road. The group also grew cassava, milled it and delivered it to the market at Petta, again using the same road. In the same watershed of Morgwang, LIPW beneficiaries dug a water dam, another community asset and they laid pipes to the nearby block farms. At the time of evaluation, members of IHISP groups were harvesting large quantities of cassava having utilised the water from the dam. This directly contributed to both food security and income generation.



These access roads further eased access to schools and health facilities. The information in spotlight 4 provides further examples of many groups that earn a livelihood as a result of NUSAF3 access roads.



Spotlight 4: Community Access Roads helping to boost job creation and livelihoods in Titi Watershed, Kiryandongo District

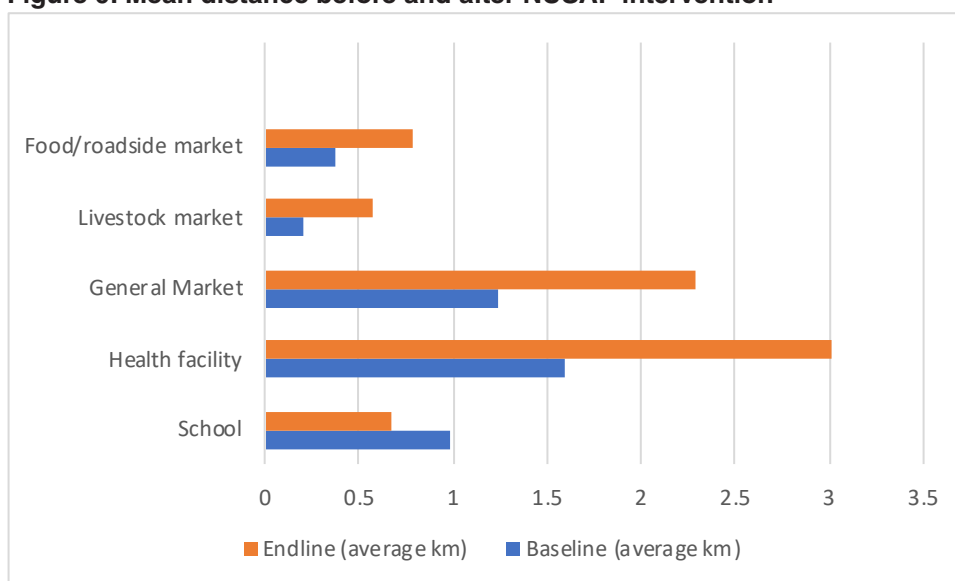
NUSAF3 helped us in road construction which helps us to transport our goods to town to sell at a better price. With the road, we are now able to take the patients to hospital faster and we are now able to move freely. We were able to acquire assets [one participant bought plot of land, some built houses, others bought cows and are now taking milk and some built houses. One sold cassava and bought pigs and the other is buying cassava from others and selling in the market]. Children are now able to go to school because we are able to sell some cassava and get money to educate our children. There is a lot of food - food has become too much, the cassava is in excess – we dry it and sell it to get salt, buy meat and fish etc. We are also saving in groups. Life has become easier because we have now expanded farming. Some of us are already selling piglets for money, and one member is already collecting money for rent from the rentals. We are very happy because of NUSAF3. Life has improved and there is less hunger.

It is evident from spotlight 4 that community assets facilitated emergency and development livelihood investments. Groups delivered their produce to markets at both lower costs and with ease, thus boosting profitability. In the Elgon region, LIPW groups opened up land, build stone embankments, and dug contours. On the same pieces of land, IHISP groups planted trees but the environmental benefits of the trees spread to whole communities.

5.3 Trends in Access to community services

Access to community infrastructure was measured in terms of the average distance from the residence of a beneficiary household to a given community asset. The results in figure 5 reveal that generally households had access to community infrastructure. The furthest infrastructure asset was a health facility and this was in a distance of less than 3km. Although far, this distance compares well with recommended national average of 3km. for some assets, it appears that the distances increased since baseline. What this means is that the households were able to access better social infrastructure because they had the means – both transport and income. This was particularly possible because of the improvement in access roads.

Figure 6: Mean distance before and after NUSAF intervention



Source: NUSAF primary data

Apart from access to health facilities which was relatively limited, there was easy access to schools, valley dams, markets and clean water sources. Even with the effects of the heavy rains, these assets remained within easy reach of the community members.

To a large degree, the improvement in access and use of community infrastructure could be attributed to the watershed management approach. The approach enabled communities to build capacity to deal with change in their lives, fostering the view that communities were part of the ecosystem – the sphere of air, water and land that surrounded them and on which all their lives depended. The Subcounty Chief of one of the Subcounties in Adjuman argued that the watershed approach was a very innovative strategy towards environment conservation and livelihood improvement. For emphasis, the district production officers applauded the approach as key in both increasing productivity and establishing assets such as access roads that improved market access. In the words of one production officer, “the watershed approach was good in that implementing a similar activity across the watershed resulting in bigger volumes of a particular crop which gave the end beneficiaries better bargaining power when looking for market” District Production Officer, Kiryandongo District. Further analysis indeed showed that sale of products in markets increased from 43.5% to 63.6% at endline largely because of improved access roads in the watersheds. As shown in table 18, beneficiary households declined trading their produce through middlemen, with the proportion falling from 44.6% at baseline to 22.9%. This finding reflects the improving nature of community infrastructure which was generally improved through the watershed approach.

Table 18: Sources market for beneficiary household produce

	Traders (middle men)	Market	Satellite collection point	Community members
Baseline	2120	2067	47	501
	44.60%	43.50%	1.00%	10.50%
Midline	1474	1379	55	226
	45.10%	42.20%	1.70%	6.90%
Endline	888	2471	44	480
	22.90%	63.60%	1.10%	12.40%

Source: NUSAF primary data

The watershed approach focused on people with similar characteristics rather than relying on existing political boundaries. These characteristics allowed them to initiate interventions to protect the natural environment, improve community assets and as well support livelihoods at household level. In implementing these interventions, vital social networks were built and these were useful in facilitating collective action for mutual benefit. The role of watershed management in supporting emergency of community infrastructure is best captured in the voice of the Pader District Implementation Support Team:

“The changes are a bit premature to talk about, but one thing I have seen is that access to markets, hospitals and other social services has improved because now trucks and other vehicles can go to the deeper villages. That has led to Lanyadyang watershed becoming a ground nut growing belt and before the opening of the community access roads, when the harvest period reached, the price would drop up to UGX70,000 per bag. But currently as a result of the improved community access road network, the prices have doubled up to UGX140,000 because now vehicles can access the area.” DIST Pader District

Whereas the excerpt above demonstrates the usefulness of the watershed management approach, more could have been achieved if some of the watershed structures were active. It was found that during implementation Watershed Management Committees were redundant. More than 80% of watershed committees were not functional yet the project manual assigned them important roles and responsibilities. The main reason for their redundancy was inadequate resources to facilitate their work. Their operations were not budgeted for, and where some activity was realised from these groups, it was largely the result collective actions derived from a shared understanding of community problems among the committee members.

Chapter Six //

Beneficiary Household incomes, livelihoods and savings



6.1 Introduction

Household income is the most direct determinant of the nature of livelihood a household can enjoy. A household with high levels of income will be able to acquire things that define good living. This relationship intertwines income with livelihood and savings. However, a household can derive income from several sources. In such circumstances, there will be one source (of income) which the household regards as the main source of their livelihood. This chapter interrogates the changes in livelihoods, savings and incomes of the NUSAF3 beneficiaries.

6.2 Qualitative Results

NUSAF3 created avenues for income generation and savings mobilization, which together positively impacted household expenditure. NUSAF3 provided direct employment through public works from which the poor earned income. Others earned income through enterprises whose start up and growth was supported by NUSAF3. The beneficiaries mobilized savings from these incomes as well as other sources for investment and household needs. There was evidence that beneficiaries utilized borrowed funds from group savings to address family emergencies, buy seeds during the planting seasons and to pay school dues for their children. A number of beneficiaries utilized their group savings to boost expenditure on productive assets, to utilize their land and to start small enterprises. The saving culture taught people to keep some money which helps them to handle unforeseen emergencies. The examples of Juma in Amudat District and the beneficiaries from Adjuman District demonstrate the role that NUSAF3 played in increasing incomes and strengthening livelihoods.



Beneficiary households Have invested in acquisition of livestock



Spotlight 5: The impact of NUSAF3 on incomes, savings and livelihoods

Juma is a young man aged 29 living in Amudat district and beneficiary of LIS. He dropped out of school in primary seven. He is married with 6 members of the household. He is a member of a group called Amudat Livestock Traders' Association. NUSAF3 supported them with UGX18million and trained them in a number of things including savings. They started saving weekly and within two years he had accumulated UGX1.5million. He also increased capital in his small business to UGX2million. He heavily relies on borrowing from the group to address family emergencies. He also keeps personal savings at home which have helped him to buy half an acre of land, two cows, household items and to take children to school as well as healthcare. He is planning to use the group savings for a bigger developmental project.

NUSAF3 significantly improved livelihoods people in Adjuman District. The NUSAF3 project started in Adjuman in 2017 to support livelihood improvement by increasing income of people. The project gave people Ox-ploughs for commercial farming. They opened their gardens and hired out labour to earn more money which they used to pay school fees for their children, buy food items at home and pay for medical care. The project organised the members to start group saving and access loans. By the survey time the group had opened about 3 to 5 acres per member. As a result of this project, each acre was expected to produce 200kgs of simsim, expecting to earn between UGX2,400,000 and UGX5,000,000. At the start the group had 15 members but expanded to 28 members with more 13 non-NUSAF3 beneficiaries joining after seeing the benefits of the group. They started with UGX8 million of savings in the first year, increasing to UGX15 million in the second year and UGX19.7 million in the third year. They lost 4 oxen but they replaced them. The group opens up people's land for farming for UGX120,000 per acre and each member aims to open 10 acres to be able to earn 1.2 million in a planting season. The group business has expanded its inputs, adding 5 hoes, 5 axes, 10 pangas and they plan to add 4 pairs of oxen in 2021. Food security has improved, members now eat three times a day, and the *"the food we eat now is balanced diet, we eat fish, beans, posho and meat... when we hire out labour we earn more money for school fees, buying spare parts and save the rest"*. People have learnt how to save, take quick loans from group and payback. The loans obtained are used for many things including doing business

The information provided in spotlight affirms that NUSAF3 simultaneously impacted incomes, livelihoods and savings of its beneficiaries. Thus it is important to make interventions in livelihood sources that allow people to earn and save. In the first place, this was the idea of NUSAF3 as conceptualised in the ToC. This evaluation shows that there was increased expenditure on household assets, especially the non-productive items such as clothes, plates, mattresses, saucepans and knives among others. Indeed, on the pay day for the LIPW beneficiaries, temporary markets were organised and local shops were as well in big business. Because people worked with NUSAF3, many of them were afforded credit at the local shops. It was notable through the eight regions of the project that the beneficiaries did not spend everything on consumption. Many of them invested in productive assets especially livestock. People bought chickens, goats, sheep and cows. Others bought land and expanded farming while some started small retail shops. Ideally, the desire to multiply the income was fairly high. Once there was multiplication of income, households spent on medical care and education with some ease. Others spent money on food, especially on the types that they did not grow such as meat, fish and rice. The excerpt below from Nebbi district demonstrates this argument:

“All members are now saving the same value amounting to UGX2,500. As of now we have about 1.3 million but every end of year we share about 250k on average. We used the money out of our business to buy goats, change feeding, and buy chicken. Others paid school while some others amongst us have constructed some houses with the help from the NUSAF3 projects.” Beneficiaries from Nebbi District.

As shown in the excerpt above, part of the money earned from NUSAF3 activities was saved in their groups. Some of the groups saved weekly while others saved part of the proceeds from their enterprises. This was in addition to the mandatory savings of UGX1500 on each workday for the LIPW beneficiaries. The beneficiaries could access their savings at any time of need. *“It is now easy to run to our savings group and borrow money for immediate scholastic needs of children who are in school.”* Explained one of the group participants. The saving culture taught people to keep some money which helped them to handle unforeseen emergencies. The role of savings in promoting livelihoods is elucidated by the information in spotlight 6.



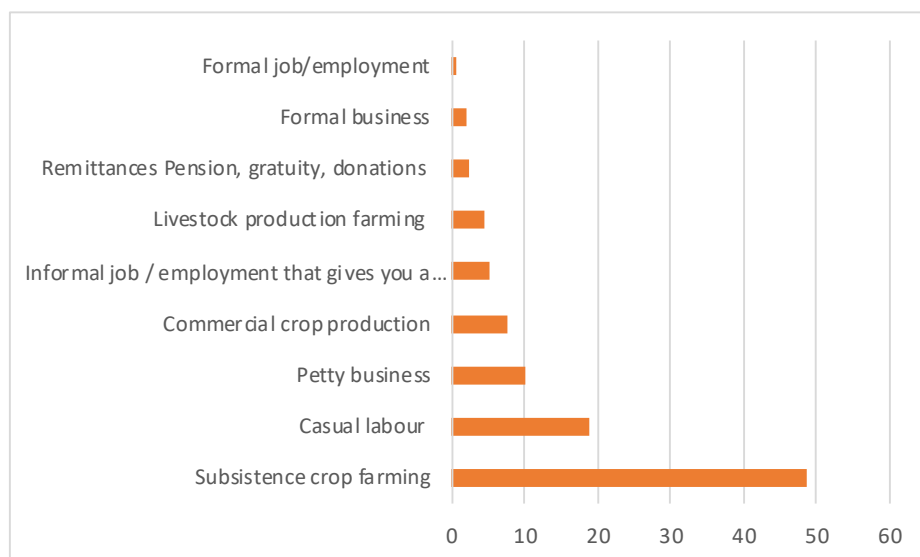
Spotlight 6: Improved Savings and Livelihood options in Nyinga I & II D, Kiryandongo

The group started with 12 members but they are now ten, after two transferred. They were given cassava stems which they planted. They were later given 12 bulls and ox ploughs. They sold the cassava and bought land. Each member planted. They were advised to plant cassava with the promise to buy the cassava. Each member had planted an acre. When they didn't buy the cassava, they were told to sell as individuals. They were able to bring together UGX4,700,000. Each member then brought on board UGX300,000 to make UGX3,600,000. They decided to buy a machine (maize mill) after realising that the machine could bring them some money. They make between UGX120,000 to UGX130,000 a week from milling between 120kgs to 130kgs. After almost 1 year, they had saved UGX3,750,000. They decided to buy a second machine. It has been operating for almost one year. It grinds about 500kg a week because the population there is bigger. At the moment they have UGX6,000,000 in savings from both machines. All members of the group are very happy and progressive.

6.3 Descriptive Statistics

Project beneficiaries were asked to indicate the main source of livelihood for their household and figure 6 shows the results. At endline nearly half of the beneficiaries derived their livelihoods from subsistence farming (48.8%). This result compares better than the national average of 68% subsistence farming. Thus, while subsistence farming is still high, NUSAF3 beneficiaries had several other sources of livelihood. These sources include casual labor (16%), petty business (10.12%), commercial crop production (6.1%) and informal employment (5.1%). Other livelihood sources that received less recognition included subsistence livestock production, hiring out labor, remittances, formal businesses, commercial farming, formal job employment among others. Reliance on these sources of livelihood has taken an upward trajectory since baseline. Thus, in terms of reducing vulnerability associated with lack of livelihood, NUSAF3 did considerably well. These results are indeed related to the resilience and welfare results discussed in the previous sections.

Figure 7: Main Livelihood Sources for NUSAF3 Beneficiaries

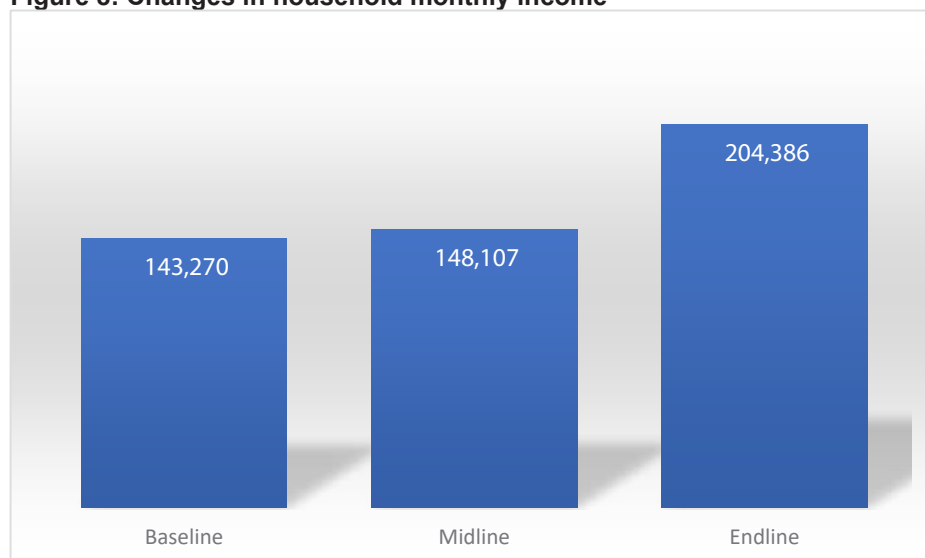


Source: NUSAF primary data

Changes in household incomes

Average household incomes were tested by comparing household monthly earnings before and after NUSAF3 intervention. Overall, average household incomes increased by 42.7%. At baseline households earned an average of UGX143,270 but this increased to UGX204,386 at endline. This increase was statistically significant ($F(2-315026) = 151.863, p < .05$). This increase is much higher than average household income increase observed for rural households between last two national household surveys of 2012/13 and 2016/17¹⁰. It is higher largely because of the interventions made by NUSAF3.

Figure 8: Changes in household monthly income



Source: NUSAF primary data

Posthoc analysis showed that the registered increase in household income between baseline and midline was insignificant but there was a significant leap between midline and endline earnings. These differences are depicted in table 19.

¹⁰ https://www.ubos.org/wp-content/uploads/publications/03_20182016_UNHS_FINAL_REPORT.pdf

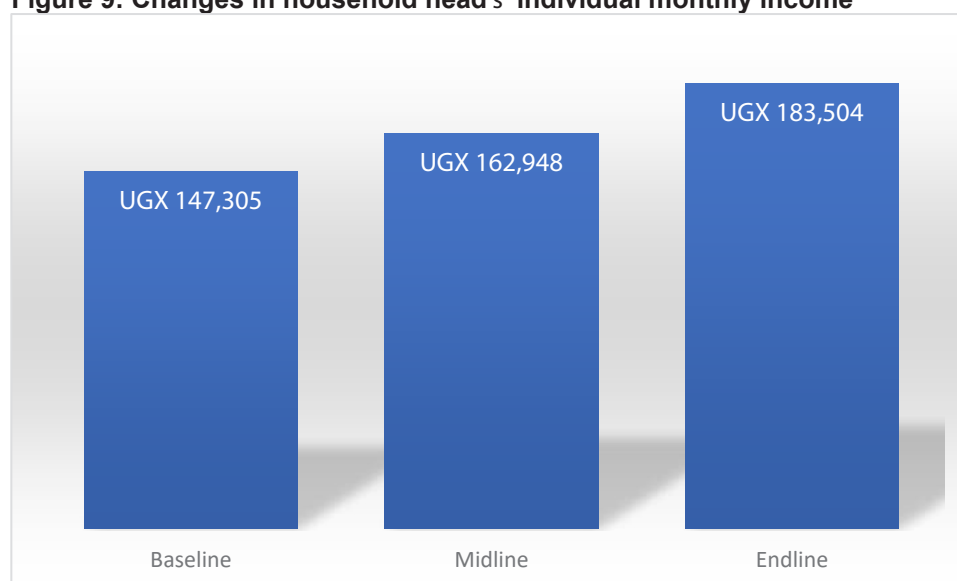
Table 19: Posthoc analysis of the changes in household monthly income

(I) Wave	(J) Wave	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Baseline	Midline	-4836.705	4039.019	.231	-12753.67	3080.26
	Endline	-61115.875*	3830.303	.000	-68623.74	-53608.01
Midline	Baseline	4836.705	4039.019	.231	-3080.26	12753.67
	Endline	-56279.170*	4077.114	.000	-64270.81	-48287.53
Endline	Baseline	61115.875*	3830.303	.000	53608.01	68623.74
	Midline	56279.170*	4077.114	.000	48287.53	64270.81

*. The mean difference is significant at the 0.05 level.

Source: NUSAF primary data

Whereas total monthly household incomes significantly increased over time, it should be noted that individual incomes of the household head accounted for up to 90% of the household incomes (figure 9). This suggests that the head of the household was the major income earner, supporting about seven people on average. It is worth to note that individual monthly incomes of the household head significantly increased from UGX147,000 at baseline to UGX184,000 ($F(2-3575)= 10.430$, $p<.05$). Such a dependency ration suggests that increasing income of the head of the household is central to the economic wellbeing of households.

Figure 9: Changes in household head's individual monthly income

Source: NUSAF primary data

6.4 Econometric Results

Household income was central in NUSAF3's theory of change as it was the mediating variable through which the intended project outcomes would be achieved. Because of this centrality, the evaluation team found it necessary to run an econometric model to determine the drivers of improved household income. The purpose was to identify the most important drivers for emphasis both in subsequent programming as well as policy formulation. Already, evidence from this evaluation shows that household income was one of the key antecedents of household resilience which itself was a driver of progress out of poverty. The results in table 20 show the key factors influencing household income among NUSAF3 beneficiaries.

Table 20: Model estimation for NUSAF Impact on Household Incomes Using Fixed Effects (within) Regression

Variable (Household Incomes)	Coefficient	Bootstrap Standard error	P> z
Sub component			
LIS	.351	.124	0.005
DRF	-2.339	.900	0.009
SLP	1.173	.525	0.025
Household size	.493	.162	0.002
Household Enterprise development	.099	.006	0.000
Household commercialization	1.161	.413	0.005
Constant	8.527	.302	0.000
sigma_u		.600	
sigma_e		3.632	
Rho		.027	
Number of observations		13,767	
Number of groups		13,767	
R-squared		0.1126	
Within			
Between		0.0705	
Overall		0.1114	
Wald chi2(7)		36498.7 (0.000)	

Source: NUSAF Primary data

Based on the results in Table 20, NUSAF household beneficiaries belonging to LIS and SLP sub-components were more likely to have more incomes than household beneficiaries from LIPW. However, DRF was also found to have a negative and significant influence on household incomes. Additionally, household enterprise development and commercialization had a positive and significant impact on average household income. This implies that any improvement in household level of commercialization and enterprise development translates into increased household incomes by 1.2 and 0.01 percent holding other factors constant. This corroborates with Opondo and Owuor (2018)¹¹ findings that rural transformation through commercialization enhances incomes of farming households. From a theoretical point of view, level of household commercialization is expected to generate welfare gains at both household and aggregate levels. The gains are derived from static welfare effects of specialization according to household comparative advantage. This translates into increased household income directly reflected in household improvements in health and nutrition which are contingent on the level of income. Similar studies found that agricultural household commercialization significantly increases annual per capita household expenditure¹².

The coefficient of control variable household size was found to be positive and significant suggesting that when household size increases by one additional member, household incomes increases by 0.49 percent holding other factors constant. As the size of a household increases, the amount of money spent on goods and services increases. In other words, a family may spend more on goods and services with the addition of more children to smoothen consumption over time, however the percentage of additional costs for each child becomes less.

¹¹ Opondo, F., & Owuor, G. (2018). *The Effect of Cassava Commercialization On Household Income of Smallholder Farmers in Arid and Semi-arid Land (Asal), A Case of Kilifi County, Kenya* (No. 2058-2018-5348).

¹² Muricho, G., Manda, D., Sule, F., & Kassie, M. (2017). *Smallholder agricultural commercialization and poverty: empirical evidence of panel data from Kenya* (No. 1916-2017-1364).

Household Savings

Household savings were an integral part of the NUSAF3 project as a key safety net. Savings were embedded in the design of the project to the extent that every LIPW and DRF beneficiary was required to have mandatory saving of 30% of their daily earnings. Likewise, a key principle for IHISP and SLP beneficiaries was regular savings. It was therefore important to assess the extent to which households adopted the saving culture.

As shown in table 21, savings at household level increased between baseline and midline before falling slightly at endline. The fall was largely attributed to covid-19 as the measures to contain the pandemic affected people's saving volumes. In fact, the reduction was attributed to increased consumption as people could not engage in usual economic activities. More encouraging is the finding that at least 50% of beneficiary households held some savings at endline. Majority of the beneficiaries also belonged to savings groups, with proportions increasing from 60.6% at baseline to 70% at endline. This means that the idea of creating safety nets for the beneficiaries gained traction and increasingly people found it useful to save in groups.

At individual level, within the three months to evaluation it was evident that personal savings in the groups increased. Individual beneficiaries' savings significantly increased from an average of UGX108,796 to UGX140,500 ($F(2-3905) = 5.186$, $p < .05$), and at the same time these people borrowed from the groups. Although the amounts borrowed reduced between midline and endline, overall, there is evidence in table 21 that saving and inter-lending was active in the groups.

Table 21: Trends in Household and individual beneficiary Savings

	Baseline	Midline	Endline	Average
Have savings as household	53.80%	59.60%	50.40%	54.60%
Belongs to savings group	60.60%	72.40%	69.50%	67.20%
Individual savings in group 3 months to evaluation	108,796	132,066	140,500	121,891
Amount borrowed from savings group 3 months before evaluation	149,001	224,950	115,530	170,942

Source: NUSAF primary data

Savings were a strong pillar of IHISP subcomponent, and for this reason, the evaluation team took strong interest in IHISP beneficiary savings. The total cumulative monetary value of savings on IHISP project were Uganda shillings (4.06 billion), translating into 45% which is fairly consistent with marginal propensity to save in a simple regression savings income model estimation (Table 22). This is much higher than the national saving rate of 19.7%¹³.

Table 22: Savings-Income Regression Model Results

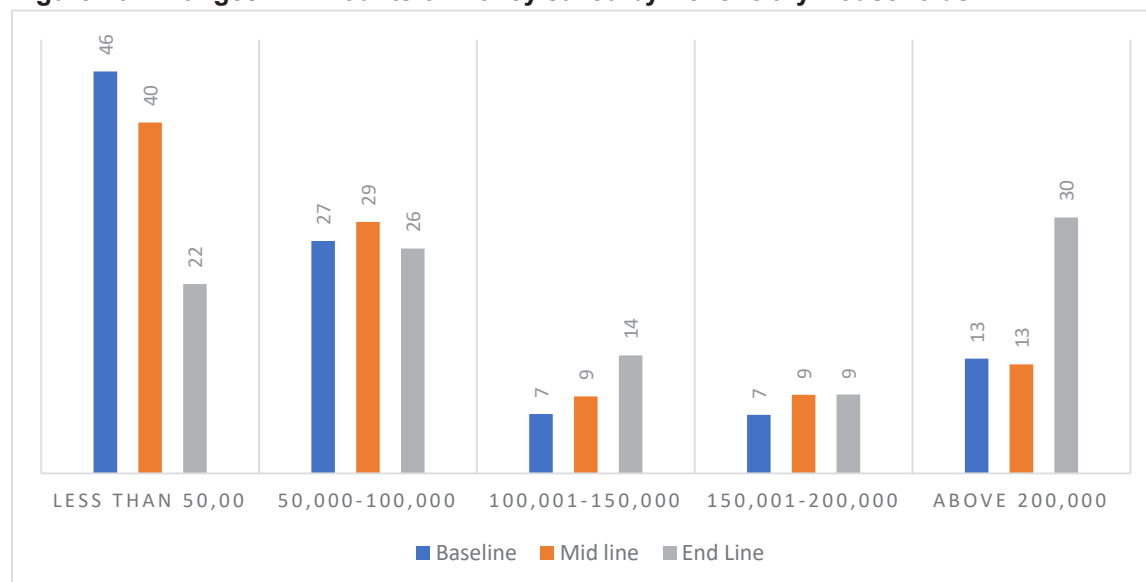
Variable (LnSavings)	Coefficient	Robust Standard error	P> z
LnIncome	.441	.032	0.000
Constant	6.206	.474	0.000
F(1, 975)	178.9(0.000)		
R-squared	0.2947		
Root MSE	3.7804		

Source: NUSAF IHISP Dataset Note: Model was run with robust standard errors to correct for heteroscedasticity

¹³ <https://data.worldbank.org/indicator/NY.GDS.TOTL.ZS?locations=UG>

However, the IHISP saving rate reduced to 34% in the last quarter of the project. Overall, on all NUSAF 3 program, the shares of households in lowest saving group (less than UGX 50,000) decreased while the shares in the highest saving group (above UGX 200,000) increased suggesting that average savings increased over the programme period (Figure 10). This means that over time, households saved more money and there was growth. Households with bigger savings were on the rise.

Figure 10: Changes in Amounts of Money saved by Beneficiary Households



Source: NUSAF3 Primary data

The associated changes in IHISP savings were associated with positive significant correlation with loans and income as shown in Table 23. The savings and income co-movements observed over the NUSAF3 programme period were consistent with findings from the Productive Potential of Public Works from a Youth Employment Program in Sierra Leone (Rosas and Sabarwal, 2016). A positive correlation between savings and loans simply implies that the higher the savings, the greater the loan amount a person would get from the savings group. In this respect, loans acted as an incentive for people to save especially if they needed to get access to higher capital amounts. Perhaps, this explains why the proportion of households saving in excess of UGX200,000 increased. Of course, savings come from income, thus the strong correlation was expected. The overall conclusion here is that households with higher incomes had a higher chance of getting loans, in part because the high incomes afforded them savings.

Table 23: Correlations Matrix

	Loans	Savings	Income
Loans	1	.700**	.386**
Savings	.700**	1	.490**
Income	.386**	.490**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Source: IHISP database

Positive observed changes in average monthly income were observed across all NUSAF components including IHISP that increased over the project period by nearly UGX 50,000 (approximately 33% to 55% increase from the NUSAF 2 HISP monthly income)¹⁴. The IHISP positive changes in both income and savings are consistent with previous HISP component of NUSAF 2.

¹⁴ <https://documents1.worldbank.org/curated/en/584381553014128394/pdf/PAD1188-P149965-IDA-R2015-0115-1-Box391433B-OUO-9.pdf>

Additionally, high rates of return on investment (RoI) values under IHISP were observed, attributed to the low cumulative loan values (Table 24). Activities with relatively low loan shares of income like live stock trading, SMEs, farming (Ox Traction) and tree planting were associated with high rates of return.

Table 24: Rate of return on investment from selected activities, IHISP

ACTIVITY	IHISP ROI (%)	Saving rates	Loan as share of Income
Per Group	706.38		
Butchery			
Catering & Events			
Crop farming	655.59	55%	52%
Horticulture			
Livestock trading	474.48	39%	22%
Produce buying/selling			
Other business/SMEs	492.94	39%	22%
Agro-processing	272.70	83%	98.4%
Apiculture	205.79	76.5%	78.8%
Aquaculture	201.26	140%	102%
Livestock production	259.17	67%	26%
Farming-Tractor	737.52	46%	41%
Farming-Ox Traction	880.41	39%	22%
Poultry keeping	22.40		
Tree planting	816.36	38.8%	33.8%
Overall component		45%	46%

Note: * Cumulative Saving to cumulative income ratio= saving rates on the project.

Source: NUSAF primary data

A Review of Evidence that changes in income were associated with increases in the members with individual or personal accounts. This consequently increased group net returns explained by the individual member drive to invest efforts and time in selected investments and hence obtain more surplus earnings for individual saving.

The econometric model results for household income revealed that savings at all levels had a positive and significant impact. This is also corroborated by qualitative analysis that households with bigger savings were more likely to have greater revenue growth in their enterprises. For instance, households whose savings were above UGX 50,000 were 63.9% more likely to have enterprise revenue growth than those whose savings were less than UGX 50,000 holding other factors constant. However, the low economic status of beneficiaries, especially in the IHISP category, creates pressure to spend whatever earnings obtained thus making the saving culture difficult.

An exposition of data on SLP revealed that the selection of self-help groups (SHGs) was largely inclined on already existing coherent and affinity community savings groups whose critical challenge was business development capital. However, there was also extension of credit to new groups, which supports the growing evidence that participation in SHGs leads to an increase in savings and the use of credit (The SEEP Network, 2017)¹⁵.

¹⁵ <https://seepnetwork.org/files/galleries/Understanding.pdf>

Chapter Seven //

Enterprise development and business growth



7.1 Introduction

Countryside population often depends on the small- and medium-size enterprises as one of their sources of livelihood. The evaluation team collected information on household engagement in business enterprise. This chapter presents findings of the inquiry, both qualitative and quantitative.

7.2 Qualitative Results

One of the biggest achievements of NUSAF3 was growth and community and individual entrepreneurship among the poor people. The evaluation found that beneficiaries from all components of the project started enterprises. The LIPW beneficiaries used their earnings to start micro and small enterprises. Most of these enterprises were engaged in brewing, livestock marketing, selling of maize and beans, retail shops, selling soap, cooking oil, salt, fish mongering, alcohol, poultry and agriculture. The beneficiaries

of LIS component engaged in slightly bigger enterprises, and while many of them succeeded as group enterprises, a number of members identified and exploited opportunities quite successfully on their own. In some instances, these opened the way for other non-beneficiaries to also start business and compete. It was also observed that the newly opened access roads boosted trade as communities would easily access markets either through transporting their goods to urban areas or traders coming to the communities to buy goods. For instance, the District Production Officer of Amudat District affirmed that apiary business among NUSAF3 beneficiaries increased honey production and supply to Kenya in tons per week. Communities started selling maize to Soroti, Mbale, Kenya and South Sudan in part because of growth of entrepreneurship. The case of Okello from Apac district depicts a myriad of entrepreneurs that NUSAF3 supported to arise, going to help so many others in their communities.



Spotlight 7: Okello, the 76-year NUSAF3 entrepreneur from Apac District

Okello Yekonani aged 76, heads a family of 8. He used to have serious income and household challenges before joining NUSAF3. On joining NUSAF3 (SLP), he received training in enterprise development and resilience against poverty. He was supported with seeds, oxen and a plough. In 2017 he earned UGX6,000,000 from his first harvest. Since then, his life has never been the same. He has completed his permanent house. He has invested in a retail shop where he earns UGX20,000 every day to meet home needs. He currently deals in a produce (cotton, simsim, beans) business. He bought a motor bike, connected clean tap water for home use and sale to the community. He has a maize sheller for use and hire to earn extra income. He also has 2 pairs of oxen and 2 ploughs that he uses but also hires out to community members. From all of this, he has bought 35 acres of farm land on which he does grazing of cows, planted a forest of “Musizi” trees, and 10 acres of sorghum which he intends to supply to breweries companies. He also extends his services (advice, ploughing and water) to other community members. All of his grandchildren who are school age are able to study without much difficulty because Okello can afford school dues. In his word, “thank you, thank you, thank you NUSAF3. Now I have a purpose in life”.

7.3 Changes in household enterprise engagement by wave of evaluation

The main source of livelihood for about 23% of the beneficiaries was petty trade. More people had this as their main source of livelihood, with proportions increasing from 20% at baseline to 29% at endline. This growth in petty trade participation is indicative of the entrepreneurial spirit of the beneficiaries. Indeed, the qualitative information corroborates with the descriptive statistics with regard to livelihood sources. Given their level of income, and the fact

that the beneficiaries were among the poorest of the poor, increase in petty trade participation was commendable.

Overall, information in table 25 reveals that a big number of people progressively participated in several livelihood sources. For instance, crop produce sellers increased from 8.7% to 9.5% while shop owners increased from 7.9% to 11.0%. All of these changes were statistically significant at 95% confidence level.

Furthermore, beneficiaries dealing in home brewing increased from 0.6% to 7.1%, while transporters rose from 0.8% to 3.9%. These increases signal to improved household income and savings, and clearly these are the outcomes of the interventions made by the project.

Table 25: Sources of livelihood for NUSAF3 beneficiaries

Business activity	Freq.	Overall	% Baseline	Endline	P-value
Petty trader	900	22.58	20.16	28.96	0.000
Butchery	484	12.15	13.97	2.22	0.000
Produce seller	354	8.88	8.65	9.51	0.453
Retail Shop	342	8.58	7.9	10.99	0.007
Livestock trader	254	6.37	8.08	1.9	0.000
Hardware Store	149	3.74	4.01	0.32	0.000
Agricultural/Veterinary inputs Store	134	3.36	3.15	3.91	0.299
Fish trader	132	3.31	4.93	2.33	0.001
Clothing/Shoe Store	101	2.53	2.92	1.48	0.02
Community health Vets	100	2.51	3.21	0.21	0.000
Hotel/food kiosk	87	2.18	2.86	1.59	0.039
Home Brewery	82	2.06	0.63	7.08	0.000
Charcoal dealer	81	2.03	1.09	4.44	0.000
Bodaboda or taxi operator/transporter	62	1.56	0.8	3.81	0.000
Firewood dealer	39	0.98	0.4	2.64	0.000

Source: NUSAF primary data

While there were notable increases in livelihood sources, some sources significantly declined. Remarkable declines were observed in butchery (from 14.0% to 2.2%), livestock trade (from 8.1% to 1.9%). These activities are capital intensive and the decline in their prevalence was attributed to the effects of COVID-19 measures. On the whole however, most of the enterprises which the households engaged into were increasing in proportion. What is notable is that agriculture continues to play a big role as most of the enterprises that gave people a livelihood dealt mainly in agricultural products.

The respondents were asked to share their opinions on the performance of their business enterprises. This question was raised to them throughout the evaluation waves. Throughout the waves, nearly half of the entrepreneurs felt that their enterprises were growing and improving (49.8%). Over the years, this perception has been the same, with 41% of entrepreneurs revealing improved performance at baseline relative to 54% who felt the same at endline (table 26). The key message here is that enterprises were growing over time. In fact, the entrepreneurs who felt that business performance had slowed down fell from 42% to 28.7% at endline.

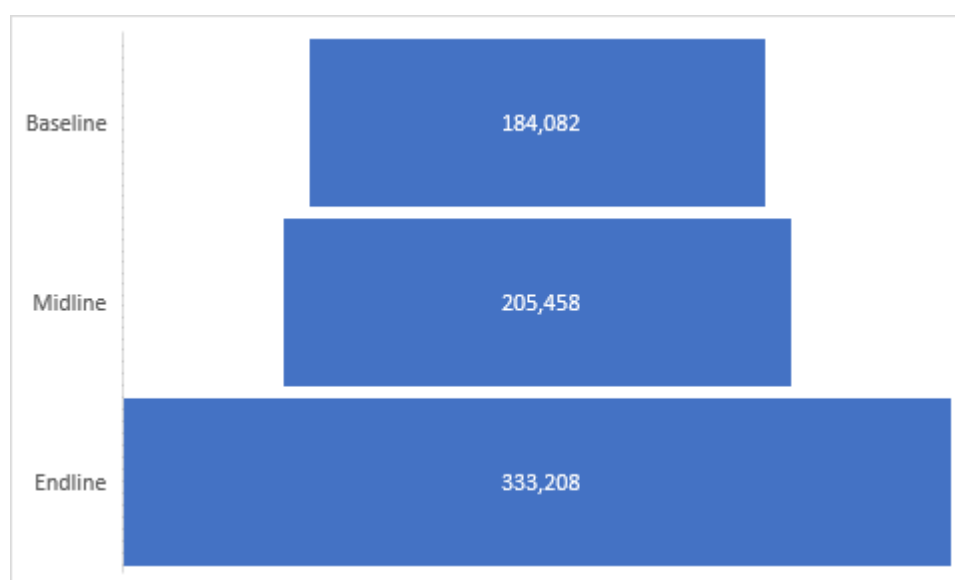
Table 26: Entrepreneur's perception of performance of business enterprise

				Total
	Not changed at all	Increased/ improved	Reduced/slowed down	
Baseline	235	608	619	1462
	16.10%	41.60%	42.30%	100.00%
Midline	194	572	229	995
	19.50%	57.50%	23.00%	100.00%
Endline	165	528	279	972
	17.00%	54.30%	28.70%	100.00%
	594	1708	1127	3429
	17.30%	49.80%	32.90%	100.00%

Source: NUSAF primary data

Changes in enterprise growth by wave

It was established that there was consistent increase in monthly earnings from business enterprises. This increase was statistically significant ($F(2-4237) = 26.959$, $p < .05$). The earnings rose from UGX184,000 to UGX333,000 at endline. In part the increase in enterprise revenues is indicative of the resilience of the entrepreneurs. It also implies that the beneficiaries identified the right opportunities and were able to earn income from their investments. With regard to the project theory of change, such a trend in enterprise growth fits in well with what the project desired to achieve – investment in productive enterprises.

Figure 11: Comparison of household enterprise engagements by wave of evaluation

Source: NUSAF primary data

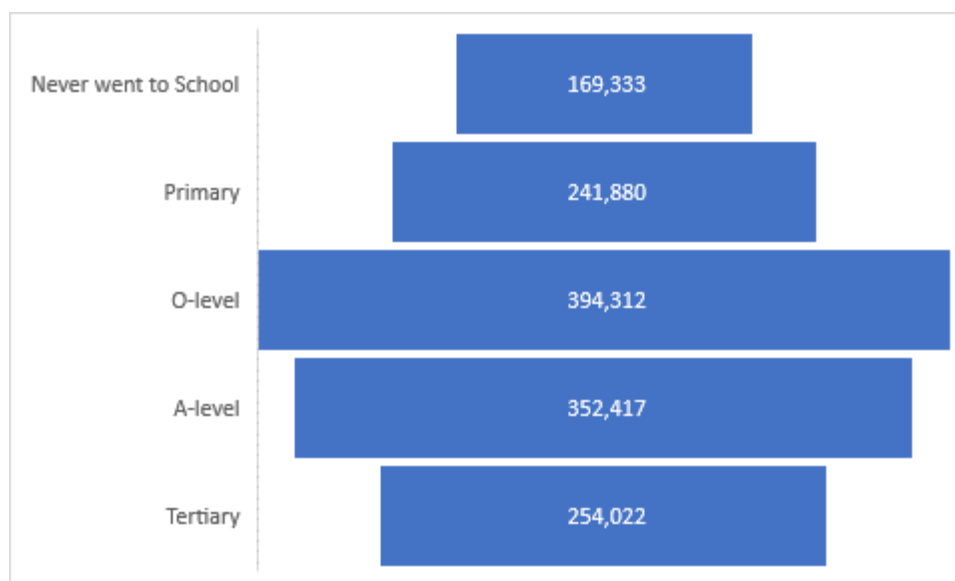
Overall, there was a significant drop in the number of beneficiaries engaged in business. Whereas at baseline about 64.83 percent of the household beneficiaries were engaged in business enterprises, at endline the proportion had dropped to 35.17 percent. This decline was attributed to a number of factors, some internal and others external. Internally, there were evident gaps in the amount of capital deployed as well as business management skills. Externally, the most acute constraint was the covid-19 which

exacerbated an already volatile business environment. The midline evaluation established that attempts made by several beneficiaries to do business were confronted by declining prices of especially produce which was the main economic commodity. The attempts to grow maize for instance were met with a sharp decline in prices, thus discouraging many prospective entrepreneurs. In Kiryango, Buliisa District the only IHISP group was praised by many as the most successful group. The group however grew maize on over 20 acres of land only to harvest little quantity due to bad weather and poor farming methods. The market price was UGX100 per kilogram of maize at the time of harvest compared to UGX700 at the time of planting and this was very discouraging.

In Nwoya, several beneficiaries grew cassava only to get stuck without market. In Pader, beneficiaries grew sunflower, a product with a small market yet ground nuts would have provided better results. In Nebbi, households engaged in fish farming, investing over UGX140 million only to earn UGX11 million. This was because of lack of skills in fish cage farming as well as lack of market (because the fish was undersize). There were significant effects of flooding and invasion of army worm which affected agro-based enterprises. All these examples demonstrate the barriers and many challenges that are associated with doing business. It is the true entrepreneurs that can survive in such environments, and thus a proportion of 34% of households doing business is no mean feat.

Interesting to note is that beneficiaries without any formal education earned the lowest from their business enterprises. The earnings kept rising with education, peaking at ordinary level education. It appears that secondary school education provided better knowledge to identify and synthesise opportunities more likely to have a higher return. Enterprises owned by beneficiaries with tertiary education were in the same revenue range as those with primary education.

Figure 12: Enterprise revenue growth by Education



Source: NUSAF primary data

7.4 Econometric Results

It is evident from this evaluation that household savings, incomes, resilience capacity and project component were significant predictors of enterprise growth. Combined, these variables could predict up to about 6.3% of the variation in enterprise revenue growth. What this means is that the component of NUSAF3 that one participated in had an influence on the revenue potential of any given enterprise they participated. It is shown in table 27 that DRF beneficiaries were 1.6 times more likely to have a growing business enterprise than LIPW beneficiaries. Similarly, SLP beneficiaries were 92.3 percent more likely

to run a growing enterprise than LIPW beneficiaries. Overall, LIPW beneficiaries were least likely register growth in business. In part the differences are attributed to the nature of training that SLP beneficiaries receive, as well as the exposure to business opportunities.

Table 27: Estimation for NUSAF Impact on Household Enterprise growth Using Random Effects GLS Regression

Variable (Household Enterprise growth)	Coefficient	Standard error	P> z
NUSAF Sub component			
IHISP	.050	.154	0.746
DRF	1.667	.270	0.000
SLP	.923	.257	0.000
Household savings			
2	.639	.177	0.000
3	1.349	.252	0.000
4	1.874	.271	0.000
5	2.768	.206	0.000
6	1.386	.394	0.000
Household incomes	.156	.021	0.000
Resilience Capacity	.504	.205	0.014
Constant	.434	.299	0.148
sigma_u	0		
sigma_e	5.2427		
Rho	0		
Number of observations	5,901		
Number of groups	3		
R-squared	0.0600		
Within			
Between	0.9751		
Overall	0.0627		
Wald chi2(7)	393.72 (0.000)		

Source: NUSAF Primary data

Household savings were also major determinants of enterprise growth. Overall, households with bigger savings were more likely to have greater revenue growth in their enterprises. For instance, the results in table 28 show that households whose savings were above UGX 50,000 were 63.9 percent more likely to have enterprise revenue growth than those whose savings were less than UGX 50,000 holding other factors constant. In fact, households whose savings were above UGX100,000 (groups 3,4, 5 and 6) were 1.4, 1.9, 2.8 and 1.4 times more likely to register enterprise revenue growth. The key message here is that households with bigger savings are more likely to invest in sizable enterprises and they will therefore make more money.

Furthermore, both household income and household resilience capacity significantly influenced enterprise revenue growth. An increase in monthly household incomes was associated with increased business enterprise growth by 16 percent while a unit improvement in household resilience capacity would increase enterprise revenue growth by 50.4%. From these findings, it is evident that household income, savings and resilience capacity can have positive impacts on growth of enterprises owned and run by households.

Chapter Eight //

Household food security and consumption



8.1 Introduction

NUSAF3 project focused on the vulnerable and active poor to enhance their food security and smoothen household consumption. Food security presents a wider positive impact on livelihoods and provides a stable ground for households to take off (Carolan M, 2012). Because of the double problem of poverty and vulnerability, NUSAF3 paid special attention on increasing food production and consumption. This chapter focuses on the impact of the project on both food security and consumption among the poor people of northern Uganda.

8.2 Qualitative Results

NUSAF3 increased food production at household level, helping households to become food secure and increase food consumption. During the evaluation exercise, several well-planned gardens were visible in the project area while beneficiaries looked healthier too. Before NUSAF3, the target beneficiaries used to be food insecure with many of them unable to afford three meals a day but because of NUSAF3, they ate 3 meals a day. NUSAF3 trained people in improved agricultural practices while providing them with improved seeds and animal varieties. They attended practical demonstrations at the block gardens which enhanced food production using Oxen as they opened more acreage and utilized better agricultural methods, knowledge and skills. The allocation of ox ploughs helped in opening up more land and facilitated food production for not only the beneficiaries but all the local communities. The case of Okok is only an example to show that many NUSAF3 beneficiaries improved food production and consumption. Indeed, for Karamoja sub region the RDC of Amudat affirmed that “ for the last six months, we have not received any food relief from the OPM”. This was indicative of the good progress made towards food security.



Spotlight 8: Okok a 56-year male with 25 children in Buliisa is food secure

I am Okok, 56 years, a resident of Oduku II, married to 1 wife. My education level is primary two. My household is comprised of 27 people (myself, my wife and 25 children, the youngest being 8 months old). I am a farmer and husband. I had no cassava gardens before NUSAF3 but now I have 9 acres of cassava. NUSAF3 gave me money (UGX500,000) which I used to hire 4 acres to plant cassava which I later harvested and sold. I sold about 60 bags of cassava and the rest was consumed. At the moment, I have 9 acres of cassava, about one and a half acres of bananas, like 100 trees of mangoes, about 20 orange trees, 6 jackfruit trees, 10 avocado trees, over 50 paw paw trees, palm trees (like 30), pineapples (80 plants), Alira trees (1 acre), neem trees (about 40) and am building a house. Life has changed as you can see (evident from the homestead and the many crops around). My children eat well and no one starves here. I am planning to grow other crops that can generate money like other breeds of mangoes, bananas, trees, etc.

8.3 Descriptive statistics

Food production at household level

Food production was a key determinant of food consumption. One would expect that an increase in food production would result into reduced hunger and an increase in income through sale of produce. It appears that there was a general bumper harvest for various crops at the time the endline evaluation was conducted (table 28). There were notable increases in the quantity of crops harvested. For instance, the average harvest of maize for 2348 households was 904kgs, a remarkable increase from under 10kgs at the baseline. Households sold some 560kgs of maize and retained over 340kg for domestic consumption. Taken together, both maize and beans registered a remarkable increase in production, some of it was sold but sufficient volumes were stored for domestic consumption.

Other crops that saw remarkable increase in production include soya bean (from 1.8kg to 403kg), cowpeas (3.3kg to 156kgs), and ground nuts (from 2.5kg to 765kgs). Overall, there was increased production of the different varieties of food, and for each of the crops, a portion was sold and the balance stored for domestic consumption. It is therefore expected that food production had a positive relationship with food consumption.

Table 28: Quantity of Food produced and Sold in the immediate past season

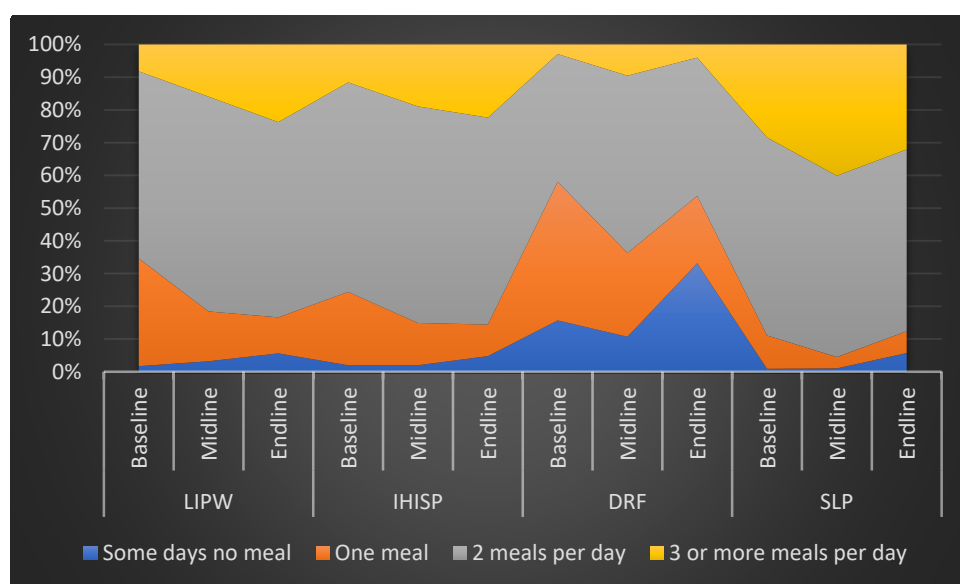
		N	Qty produced (kg)	Qty sold (kg)	Reserve (kg)			N	Qty produced (kg)	Qty sold (kg)	Reserve (kg)
Maize	Baseline	593	8.093	192.72	-184.627	Green gram	Baseline	1324	394.45	1.66	392.79
	Midline	762	0.281	162.48	-162.199		Midline	940	91.67	11.36	80.31
	Endline	2348	904.281	562.4	341.881		Endline	113	423.73	39.25	384.48
Beans	Baseline	2244	3.675	1.74	1.935	Sun flower	Baseline	429	20.12	8	12.12
	Midline	2365	170.708	47.4	123.308		Midline	304	8.52	286.82	-278.3
	Endline	1707	169.453	75.66	93.793		Endline	218	534.29	396.8	137.49
Sorghum	Baseline	1479	2.46	3	-0.54	Vegetables	Baseline	522	9.81	3.36	6.45
	Midline	1964	73.83	23	50.83		Midline	401	53.832	3.92	49.912
	Endline	814	206.6	99.18	107.42		Endline	490	44.12	14.82	29.3
Millet	Baseline	947	3.46	2.79	0.67	Sweet potatoes	Baseline	669	3.14	4.64	-1.5
	Midline	1375	62.48	24.95	37.53		Midline	420	29.12	6.66	22.46
	Endline	381	262.24	119.04	143.2		Endline	851	424.5	70.57	353.93
Peas	Baseline	551	3.33	2.06	1.27	Cassava	Baseline	416	4.8659	4.29	0.5759
	Midline	1096	41.23	11.59	29.64		Midline	448	248.4938	14.65	233.8438
	Endline	147	156.17	128.61	27.56		Endline	1503	657.4025	192.76	464.6425
Sim sim	Baseline	192	1.67	4.44	-2.77	Yams	Baseline	276	559.18	.	0
	Midline	899	10.82	47.45	-36.63		Midline	1274	344.24	97	247.24
	Endline	539	168.69	83.05	85.64		Endline	74	58.66	60.9	-2.24
Soya beans	Baseline	492	1.8415	2.767	-0.9255	Matooke	Baseline	54	9.22	.	0
	Midline	1132	44.8198	166.403	-121.583		Midline	76	35.19	2.81	32.38
	Endline	387	403.3789	279.344	124.035		Endline	153	95.15	86.38	8.77
Ground nuts	Baseline	322	2.5	797.24	-794.74	Rice	Baseline	44	2.89	.	0
	Midline	1058	61.36	61.31	0.05		Midline	25	55.92	2.94	52.98
	Endline	710	765.11	106.22	658.89		Endline	207	832.14	240.34	591.8

Source: NUSAF primary data

Number of meals consumed per day by wave and component

As expected from the increase in food production (figure 13), the number of beneficiaries eating 3 or more meals per day increased from 7.6% to 23%. Most significantly, the households consuming one meal a day fell from 32.5% to 10.3%. The increased proportion of beneficiaries taking more meals signifies that the household were transforming significantly from food insecurity to secure food position for their members. The improved number of meals impacts the issues of stunted growth and wasting that had been commonly mentioned in the targeted communities at the baseline study. When number of meals was linked to income and savings as well as progress out of poverty, it was evident that the improved food consumption had supported the Households to save money that would be spent on health care particularly due to nutritional related diseases. The one thing was in abundance throughout the regions of the project was food production. With NUSAF3 there was increased food production which allowed people to eat more meals per day.

Figure 13: Number of Meals Eaten in a day



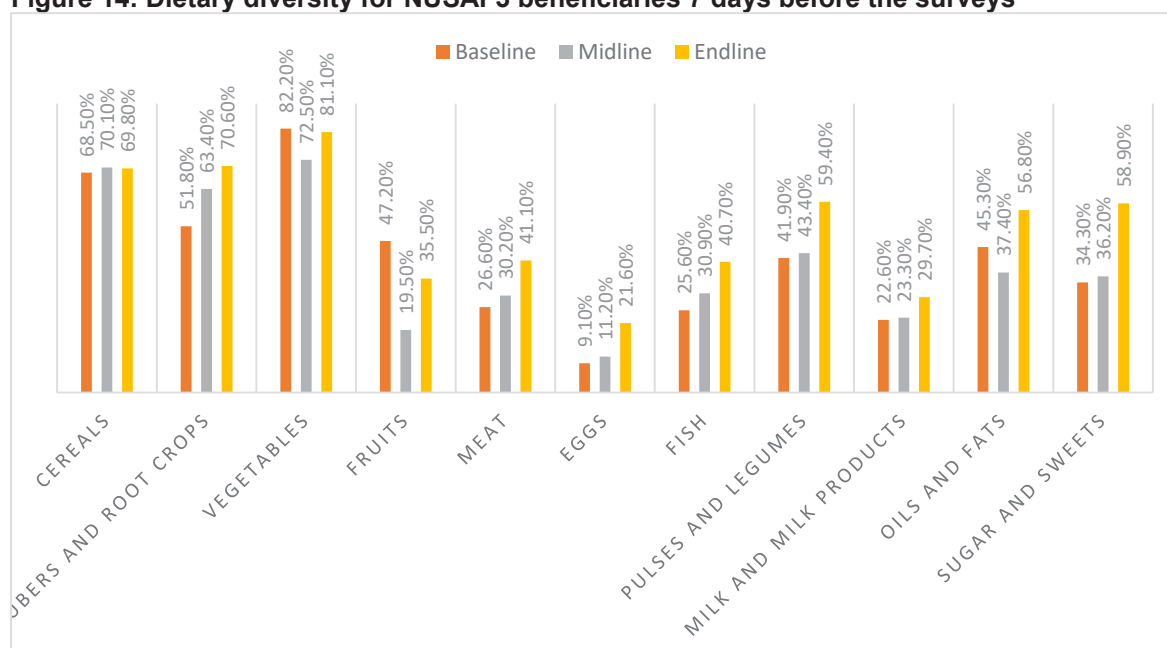
Source: NUSAF primary data

Looking at baseline and endline results, the number of beneficiaries going without a meal slightly increased and this was largely among DRF beneficiaries. In fact, DRF beneficiaries dominated beneficiaries going with one meal a day. There was a drop in these proportions at midline but then increased at endline. This means that generally some small portion of DRF beneficiaries remain food insecure although majority of their counterparts appear to have two or meals per day.

It is important to note that the standardised results of the Food Consumption Score (FCS) do not dispel evidence-based results from qualitative information about dietary improvement, stagnation or failure. A number of variables were used to compute the food consumption. The focus was to look at the dietary diversity for the households seven days before each wave of evaluation. The assessment looked at consumption of cereals, tubers and root crops, vegetables, fruits, meat, eggs, fish, pulps and legumes, milk and milk productions, oils and fats as well as sugar and sweeteners (figure 14).

It is evident in figure 14 that there was increased consumption of tubers and rootcrops from 51.8% to 70.6% as well as consumption of meat from 26.6% to 41.1%. Although still small, there were relatively more households consuming eggs (from 9.1% to 21.6%), fish (from 25.6% to 40.7%) and pulses (from 41.9% to 59.4%). Overall, however, majority of households (over 70%) consumed cereals, tubers and root crops, and vegetables. A look at results in table 20 shows that this consumption was largely driven by increased production of these food types. Consumption of meat, fruits, eggs, fish, milk and milk products was generally low.

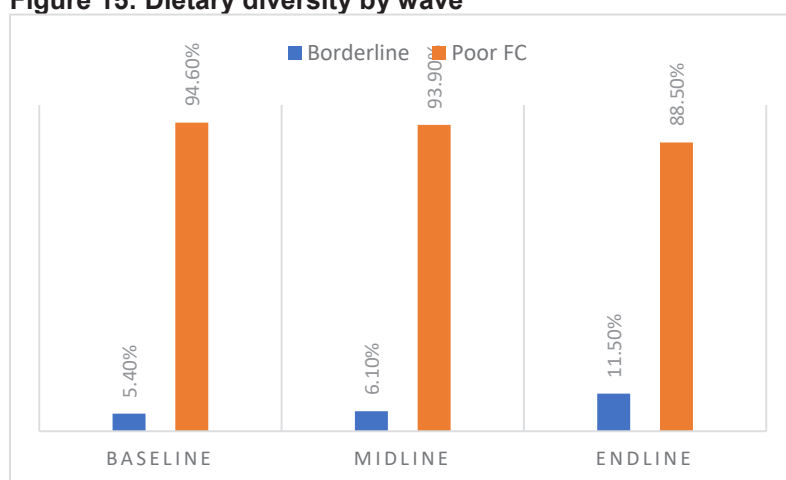
Figure 14: Dietary diversity for NUSAF3 beneficiaries 7 days before the surveys



Source: NUSAF primary data

NUSAF3 project improved food diet of beneficiaries from poor up to borderline. The project improved food diet of beneficiaries from poor up to borderline. It is however important to note that if more support is given, it could transit the households trapped in poor food consumption to borderline and acceptable region for those still at borderline. By the time the endline evaluation was conducted the percentage of households in Borderline had shifted from 5.4% to 11.5%. Those with poor food consumption reduced from 94.6% to 88.5% implying a 1.2 percentage points of dietary improvement rate per annum.

Figure 15: Dietary diversity by wave



Source: NUSAF primary data

It is evident that NUSAF3 project did not only support households towards increasing the number of meals eaten per day but it also supported dietary improvement by refocusing the beneficiaries to consume important diet for good health and body development to leverage great productivity and wipe out nutritional related diseases (Swindale .A & Bilinky P, 2006). The transition rate of about 2% per annum from poor to borderline has had significant impact towards reducing nutrition related cases reported in health units. There was a reported disappearance of kwashiorkor in NUSAF3 focal sub-regions during the interaction with one of the district officials that participated in the interviews during data collection.

Although there is improvement in the diet of food consumed, it should be emphasised that there is room for further improvement. A population that is largely consuming up to borderline tends to raise children that are stunted and wasted (Ukegbu & Ogu, 2017). While malnutrition diseases reportedly reduced it does not dispel the idea that stunting and wasting still prevailed given that current health statistical reports still report of the same.

Looking at beneficiaries of sub-components, it emerges that apart from DRF, beneficiaries of all the other subcomponents registered in improvement in diet. For instance, beneficiaries of SLP had their borderline diet improve from 3.2% to 15% while the borderline diet of IHISP beneficiaries rose from 9.3% to 15.8% (table 29). these results imply the beneficiaries of livelihood investment support registered a better improvement in food diet compared to their labour-intensive works colleagues. Indeed, borderline diet among LIPW beneficiaries improved from 4.4% to 9.8% while that of DRF beneficiaries fell from 0.2% to 0.9%. Overall, DRF beneficiaries had the worst diet among all categories of beneficiaries.

Table 29: Food consumption scores by component and wave of evaluation

		Food Consumption	
		Borderline	Poor FC
LIPW	Baseline	4.40%	95.60%
	Midline	2.50%	97.50%
	Endline	9.80%	90.20%
IHISP	Baseline	9.30%	90.70%
	Midline	9.60%	90.40%
	Endline	15.80%	84.20%
DRF	Baseline	0.20%	99.80%
	Midline	2.50%	97.50%
	Endline	0.90%	99.10%
SLP	Baseline	3.20%	96.80%
	Midline	9.00%	91.00%
	Endline	15.00%	85.00%
TOTAL	Baseline	5.40%	94.60%
	Midline	6.10%	93.90%
	Endline	11.50%	88.50%

Source: NUSAF primary data

A look at the regional distribution of dietary diversity reveals that different components of the project contributes differently to the diet of the beneficiaries in different regions. In Acholi Sub-region, before the project started, 94.6% of the beneficiaries were consuming insufficient food diet and 5.4% were consuming moderate food diet (table 30). By the final wave of evaluation, beneficiaries in this region with borderline diet had registered a double proportion increment to 10.4%. Like the Acholi sub-region, all other regions reported a drop in the proportions of beneficiaries with insufficient food diet but registered a double percentage point increase in the moderate dietary consumption.

Table 30: Dietary Diversity by region and Wave of project evaluation

Component		Food Consumption		Total
		Borderline	Poor FC	
Achoi	Baseline	16	471	498
		5.4%	94.6%	100%
	Midline	6	341	347
		1.7%	98.3%	100%
	Endline	85	735	820
		10.4%	89.6%	100%
Bukedi	Baseline	15	414	443
		6.5%	93.5%	100%
	Midline	13	312	325
		4.0%	96.0%	100%
	Endline	33	356	389
		8.5%	91.5%	100%
Bunyoro	Baseline	21	301	339
		11.2%	88.8%	100%
	Midline	10	228	238
		4.2%	95.8%	100%
	Endline	62	267	329
		18.8%	81.2%	100%
Elgon	Baseline	14	410	431
		4.9%	95.1%	100%
	Midline	6	385	391
		1.5%	98.5%	100%
	Endline	8	400	408
		2.0%	98.0%	100%
Karamoja	Baseline	13	1700	1713
		.8%	99.2%	100%
	Midline	7	953	972
		2.0%	98.0%	100%
	Endline	10	646	689
		6.2%	93.8%	100%
Lango	Baseline	35	796	884
		10.0%	90.0%	100%
	Midline	11	297	308
		3.6%	96.4%	100%
	Endline	64	320	384
		16.7%	83.3%	100%

Teso	Baseline	40	536	576
		6.9%	93.1%	100%
	Midline	42	484	583
		17.0%	83.0%	100%
	Endline	102	433	535
		19.1%	80.9%	100%
West Nile	Baseline	38	553	591
		6.4%	93.6%	100%
	Midline	74	1042	1141
		8.7%	91.3%	100%
	Endline	90	586	676
		13.3%	86.7%	100%

Source: NUSAF primary data

The biggest improvements were reported among SLP, LIPW and IHISP beneficiaries. The proportion of highly insecure beneficiaries were reported in DRF component compared to the rest of the components (72%) whereas SLP beneficiaries had the highest proportion of the very food secure households (13.6%). Overall, 10% of the NUSAF3 beneficiaries were very food secure (table 31).

Taking a sneak peek of the impact at sub-region level attributed to NUSAF3 project ranging from food security, poverty progression, wealth creation and Resilience to shocks, substantial changes were reported when contemporary statistical indices were computed. Whereas the improvement in food diet was reported in all regions, all the beneficiaries had not crossed the consistent consumption of the accepted food diet on a weekly basis. However, the shifting from poor to moderate is an indication that beneficiaries had progressively been empowered to consume more and this has directly impacted the nutritional related diseases like kwashiorkor, stunting and wasting.

The highest proportion of food insecurity among NUSAF3 beneficiaries was slightly higher than the national percentage by 15 percentage points (45.8% vs 30% national figure reported by UBOS in 2020). The NUSAF3 Project agenda sought to enhance food security facilitating the needed safety nets among the vulnerable poor. The reported transition of households shifting into a very secure category is perhaps a significant finding. This implies that 10 in every 100 households that used to be very poor possessed enough food and their occupants did not live in hunger or fear of starvation. As a result NUSAF3's households had sufficient quantities of appropriate, necessary types of food from domestic production, and commercial imports. The project boosted incomes and savings at household level as well as food production from the Ox-traction technology not forgetting the block farming through LIPW and IHISP.

The evaluation team further computed the coping strategy index as an indicator of food security. Coping strategy Index at the region level dug deep in understanding the extent to which beneficiaries still applied means that indirectly indicated the severity of food insecurity in that region. In this case, the copying strategy index revealed the proportions that were very Secure, Moderate and highly insecure. In all the regions 10 in every 100 beneficiaries were very food secure. Being very food secure implied that the household of the NUSAF3 beneficiaries had enough food throughout and the food was in sufficient quantities. The households did not at any point report using some copying mechanism options that indirectly relate to food insecurity.

Table 31: Consumption Score Index and Components

Components	CSI			Total
	Highly Insecure	Moderate	Very Secure	
LIPW	826	749	147	1722
	48.00%	43.50%	8.50%	100%
IHISP	412	376	124	912
	45.20%	41.20%	13.60%	100%
DRF	327	121	4	452
	72.30%	26.80%	0.90%	100%
SLP	324	579	136	1039
	31.20%	55.70%	13.10%	100%
Total	1889	1825	411	4125
	45.80%	44.20%	10.00%	100%

Source: NUSAF primary data

For LIPW beneficiaries, 9% of them were very secure with the West Nile and Bunyoro presenting the highest percentage of the beneficiaries that had enough food consistently (25% and 9% respectively). Karamoja reported the highest proportion of highly food insecure households (85%) while Bunyoro had the highest percentage of the moderate class. The percentages presented looked at region specific distribution and painted a picture after taking stock of responses from the beneficiaries in each of the regions. Whereas in Karamoja the insecurity was related to drought, flooding and crop diseases, in Bunyoro the problem was largely crop diseases and flooding. These challenges reduced food production, leading to food insecurity.

The general situation among the IHISP beneficiaries presented that in every 100 households almost 15 were very food secure. Bunyoro reported the highest proportion of very secure beneficiaries (49%). This implies that nearly half of the IHISP beneficiaries in Bunyoro were very food secure. Elgon presented the highest proportion of Moderate Class among its beneficiaries while Karamoja reported the highest number of the very insecure class among the IHSIP. For DRF, the highest proportion was still insecure (72%) although a good number had transformed into a moderately secure class (27%). Only 1% reported to be very food secure by the time the endline evaluation was conducted.

In the SLP beneficiaries, 13% had transformed into a very food secure class. Bunyoro and Elgon reported the highest proportions of the very food secure beneficiaries in compared to other region (52% and 40% respectively).



Food consumption improved but diet remained almost the same, either borderline or poor

Table 32: Food Security measured by the coping strategy index per region

Component		CSI Categories labeled			Total
Highly insecure		Moderate	Very Secure		
LIPW	Acholi	94	64	9	167
		56%	38%	5%	100%
	Bukedi	137	76	12	225
		61%	34%	5%	100%
	Bunyoro	38	140	18	196
		19%	71%	9%	100%
	Elgon	109	151	15	275
		40%	55%	5%	100%
	Karamoja	142	25	0	167
		85%	15%	0%	100%
	Lango	70	75	2	147
		48%	51%	1%	100%
	Teso	79	159	18	256
		31%	62%	7%	100%
IHISP	Acholi	124	60	36	220
		56%	27%	16%	100%
	Bukedi	52	31	8	91
		57%	34%	9%	100%
	Bunyoro	29	12	39	80
		36%	15%	49%	100%
	Elgon	21	56	2	79
		27%	71%	3%	100%
	Karamoja	50	7	2	59
		85%	12%	3%	100%
	Lango	48	115	9	172
		28%	67%	5%	100%
	Teso	10	20	14	44
		23%	45%	32%	100%
	West Nile	78	73	16	167
		47%	44%	10%	100%
		412	374	126	912
		45%	41%	14%	100%

DRF	Bukedi	6	0	1	7
		86%	0%	14%	100%
	Karamoja	315	121	2	438
		72%	28%	0%	100%
	Teso	6	0	0	6
		100%	0%	0%	100%
	West Nile	0	0	1	1
		0%	0%	100%	100%
SLP	Acho	114	249	31	394
		29%	63%	8%	100%
	Bukedi	18	23	11	52
		35%	44%	21%	100%
	Bunyoro	15	8	25	48
		31%	17%	52%	100%
	Elgon	10	8	12	30
		33%	27%	40%	100%
	Karamoja	23	2	0	25
		92%	8%	0%	100%
	Lango	21	37	4	62
		34%	60%	6%	100%
	Teso	54	128	30	212
		25%	60%	14%	100%
	West Nile	69	124	23	216
		32%	57%	11%	100%
		324	579	136	1039
		31%	56%	13%	100%

Source: NUSAF primary data

Expenditure priorities was used as a proxy variable to document the state of food security among NUSAF3 Beneficiaries. Households that spent mostly on food compared to other items were likely to be vulnerable to food deprivation, regardless of their current food availability status. In any case of income shortfall it could directly impact the quality and quantity of food eaten by those households spending mostly on food items. When tracking food insecurity using this variable, overall, the project led to a drop of 3% points from 63% to 60% implying medium food insecurity had been achieved (table 33). However, the situation was different for DRF and SLP which had very high food insecurity with more than 77% of the beneficiaries spending more on food items than other items.

Table 33: Expenditures Priorities (access)

Items spent on Most			Food	Other items	Total
LIPW	Baseline	Count	1 168	634	1 802
		%	64.8%	35%	100%
	Midline	Count	808	611	1 419
		%	56.9%	43%	100%
	Endline	Count	790	630	1 420
		%	55.6%	44%	100%
IHISP	Baseline	Count	965	896	1 861
		%	51.9%	48%	100%
	Midline	Count	571	727	1 298
		%	44.0%	56%	100%
	Endline	Count	620	684	1 304
		%	47.5%	52%	100%
DRF	Baseline	Count	371	74	445
		%	83.4%	17%	100%
	Midline	Count	424	205	629
		%	67.4%	33%	100%
	Endline	Count	428	14	442
		%	96.8%	3%	100%
SLP	Baseline	Count	950	280	1 230
		%	77.2%	23%	100%
	Midline	Count	673	285	958
		%	70.3%	30%	100%
	Endline	Count	1 302	781	2 083
		%	62.5%	37%	100%
Total	Baseline	Count	3 083	1 810	4 893
		%	63.0%	37%	100%
	Midline	Count	2 052	1 623	3 675
		%	55.8%	44%	100%
	Endline	Count	3 140	2 109	5 249
		%	60%	40%	100%

75+: very high (very vulnerable to food insecurity), 65–75: high, 50–65: medium, <50: low

Source: NUSAF primary data

8.4 Econometric Results

Overall, household savings, access to land for agricultural production, household commercialization, poverty progression and average household income accounted for nearly 20.24 percent of total variation in household food consumption (table 34). The interclass correlation shows that nearly 5.8 percent of the variance was due to differences across panels. These factors underscore what needs to be done at household level in order to improve food consumption.

Table 34: Model estimation for NUSAF Impact on Household Food Consumption Using Fixed Effects (within) Regression

Variable (LnFood Consumption scores)	Coefficient	Standard error	P> z
NUSAF Sub component			
2	.376	.019	0.000
3	.240	.023	0.000
4	.196	.022	0.000
Household savings levels			
2	.015	.026	0.59
3	.082	.037	0.027
4	.050	.039	0.201
5	.018	.030	0.60
6	-.009	.020	0.640
Access to land for agricultural production	.019	.011	0.082
Household commercialization	.002	.019	0.120
Poverty Progression	.243	0.06	0.000
Household income	.001	.002	0.310
Constant	1.203	.028	0.000
sigma_u		.05834	
sigma_e		.76623	
Rho		.00576	
Number of observations		13,767	
Number of groups		3	
R-squared		0.2031	
Within			
Between		0.0012	
Overall		0.2024	
Wald chi2(7)		292.03 (0.000)	

Source: NUSAF Primary data **Note:** sigma_u = standard deviation of residuals within groups ui; sigma_e = standard deviation of residuals (overall error term) ei; rho' is known as the intraclass correlation.

The findings in table 34 further reveal that IHISP, DRF and SLP beneficiaries were 37.6%, 24% and 19.6% more likely to consume more food than LIPW beneficiaries. Additionally, household savings levels above UGX 100,000 but below UGX 150,000 had a positive and significant impact on average household food consumption scores. This means that any additional savings by household beneficiaries translates into increased household expenditure on food consumption. Therefore, constituted provided the needed resources for either purchasing food or investing in increased food production. More important, a reduction in poverty rates would increase household food consumption by 24% and this was statistically significant.



Improved Food Security

Chapter Nine //

Social capital, inclusion and women empowerment




9.1 Introduction

Social capital is an important livelihood asset that households can leverage upon to address their needs. It is also helpful in addressing community needs. The design of NUSAF3 deliberately focused on building social capital among beneficiaries. The project further put emphasis on women empowerment and on promotion of inclusion of the most marginalised people. This chapter discusses the findings on the impact of the project on social capital development, social inclusion and women empowerment. The chapter further explains how NUSAF3 impacted the beneficiaries' attitudes towards work and investment. This was a central tenet of the project theory of change.

9.2 Impact on Social capital development and social harmony

NUSAF3 has led to growth in social capital and inclusion. The watershed approach of NUSAF 3 ensured that members of the same watershed participated in a given activity as a group. Watershed members became united and carried out their activities as a group with similar objectives and goals. Even in times of adversity, they stood with each other as a family. There was team work in these groups and as a result, they were able to achieve their objectives. Some of the NUSAF3 groups transcended into stronger ties where individuals relied on each other, bound by trust, reciprocity and networking. These assets reduced transaction costs, improved learning and most importantly fostered group activities such as saving and investment. The experience of Oloro I extraction in Lira demonstrates how working in groups fostered development of social capital.



"We are running group and individual savings. Each member saves approximately UGX20,000 per week. Group savings stand at UGX20million from members... we enjoy good social relations that have minimised violence amongst community members. Group work is more productive and improves social relations, planning and managing small scale businesses, multi skills are acquired because of teamwork, and borrowing and lending amongst the group is possible because of good relations." Members of Oloro I Oxtraction for Soya Beans and Maize Production, Lira District

The example of Oloro I Ox traction is representative of so many cases that depict social capital development. It was a deliberate move by NUSAF3 to place people into groups. Although some groups collapsed, some were able to forged social relations and convert the groups into powerful vessels of social development. Majority of IHISP and SLP groups that were successful thrived on social relations built on trust. Because of trust, members mobilised savings, collectively decided on how to invest their savings, and advised each other on both business and personal matters. It was discovered that in the weekly meetings that groups help, members with personal needs expressed them to the group members and they were assisted in good faith. In part, NUSAF3 made the first move (organising beneficiaries into groups) and allowed members to develop their group norms and social relations. This way it was easy to borrow money, members helped one another on their gardens, especially during planting, weeding and harvesting.

The quantitative results showed that at baseline, nearly 60% of households belonged to social groups but the proportion reduced by half at midline and remained at the same level at endline (table 35). The sharp fall was attributed to the fact that at project inception, people were expected to belong to groups but after sometime, people found what worked and what did not work for them. Thus, retaining 33% in these groups throughout midline and endline evaluations was in itself a project achievement. It means that the idea of group work performed well, and allowed natural selection to weed out hedonists and unserious members. Thus, those who remained in the groups had a clear sense of purpose and therefore were able to build ties based on common interests. Beneficiaries counted a number of benefits from the social groups they belonged to. These benefits included having close friends with whom they shared their problems, training on how to manage finances and friends who helped with financial assistance. These

benefits were emphasized during qualitative engagements. Most importantly, up to 68% of the households believed that their friends were trustworthy.

Table 35: Household's social capital by wave of evaluation

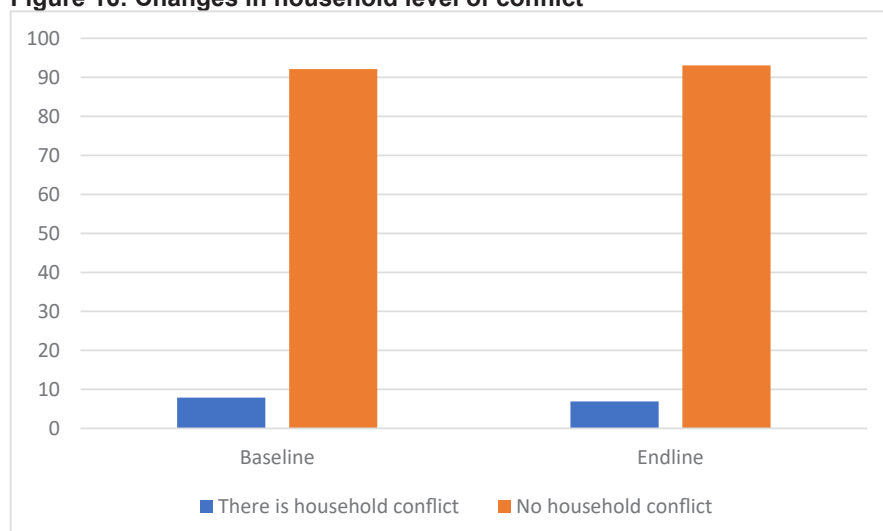
Access to social group	Wave of evaluation		Total
	Baseline	Endline	
Yes (1)	1,991	1,338	3,329
	59.81	40.19	100.00
	36.73	33.19	35.22
No (2)	3,429	2,693	6,122
	56.01	43.99	100.00
	63.27	66.81	64.78
Total	5,40	4,031	9, 451
	57.35	42.65	100.00
Pearson chi-square (1)		12.7079(0.000)	

Source: NUSAF primary data

At midline evaluation, households were asked whether they would volunteer resources and time to solve problems affecting their communities, and nearly three quarters of them answered in the affirmative. Such an overwhelming response was depictive of social cohesion in communities. At endline, households demonstrated a strong sense of social cohesion reflected by peace both in households and whole communities. The results in figure 16 reveal that up to 93% of households at both endline and baseline affirmed presence of cohesion at family level. Such a level of cohesion implies that there were opportunities for household members to work together without having conflicts. Social harmony is an important requirement for household socio-economic development (Munene, et al, 2005).



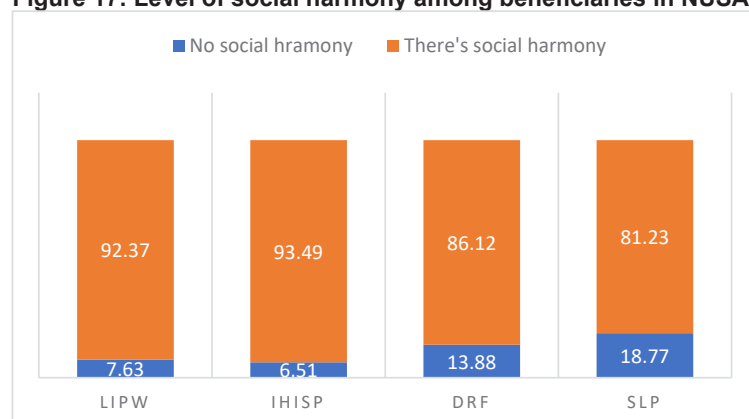
Figure 16: Changes in household level of conflict



Source: NUSAF primary data

Looking at level of social harmony among beneficiaries in different sub-components, it is evident in figure 16 that LIPW and IHISP beneficiary households were the most peaceful. Households in SLP appear to have had a higher level of conflict, signalling to limited harmony among members of households. A vast majority of these conflicts were related to resources, particularly money and land. Such disharmony was bound to disrupt development at household level as members would lose time, energy and other useful resources in conflicts. About 8% of DIST members and 7% of community development officers indicated that most of these conflicts were related to money, especially where women were earning more than men. For instance, the CF of one of the watersheds in Amudat district indicated that there was “domestic violence due to increased access to money which created more alcoholism and polygamy”. In Tororo, the NDO noted some level of domestic violence in communities among married couples where some men were particularly against their women working. In Budaka, the CFs noted viewed violence from a cultural perspective where men felt that they should have been in leadership of the project and not their wives. In Kiryandongo, one CF noted that “after one woman getting a bull, the husband wanted to sell it without the wife’s consent leading to a scuffle”. From these examples, it is evident that while violence was not widespread, in the few places where it existed, there was a connection to women owning resources. There was no mention of any violence involving men only without dragging in women. Overall, however, as seen in figure 17, there was a high level of harmony among beneficiaries, save for DRF and SLP where conflict was mentioned by 14% and 19% of beneficiaries respectively.

Figure 17: Level of social harmony among beneficiaries in NUSAF Sub-components



Source: NUSAF primary data

Whereas incidences of conflict were few and far between, it was established that a vast majority of these conflicts were related to money. Nevertheless, there was a sharp fall in money related conflicts from 93% at baseline to 31% at endline (table 36). The decline was largely attributed to improved welfare at household level and engagement of women in income generating activities of NUSAF3. However, since still one third of the households regularly quarrelled over money, it is important to note that unless welfare continues to rise, such conflicts will rise. Qualitative evidence suggests that quarrels over money increase with poverty especially because household heads have several key household needs they may not be able to solve. What is more worrying, and which is a national problem currently is the rise in conflicts over land. Up to 24% of the households that had conflicts (or some 326 households) quarrelled over land, and the proportion sharply increased from just 6% at baseline.

Table 36: Causes of conflict at household level before and after NUSAF intervention

Most causes of conflict	Freq.	% Baseline	% Endline	P-value
Quarrels over money	4,055	92.71	30.82	0.000
Quarrel over land	326	6.05	24.01	0.000
Quarrels over other HH resources	70	0.40	19.0	0.000
Mistrust	27	0.16	7.17	0.000
Sexual relationship/intimacy	16	0.33	0.72	0.286
Cultural beliefs	13	0.07	3.58	0.000

Source: NUSAF primary data

9.3 Contribution to women empowerment

NUSAF3 impacted the women of Northern Uganda economically, socially and psychologically primarily by improving their income levels and ensuring their participation in project management and leadership. The women earned income which they used to contribute towards their household expenditure like buying food, clothes, medication etc. thereby reducing the expenditure burden on husbands. They also acquired household assets like saucepans, bicycles, TVs, and even livestock. Lokwi Hellen Zaitun, 39 years old from Naligoi village Lokoreto parish, Kangole sub county in Napak said, “My life changed as I am now able to pay school fees, buy food and household items. I bought assets like goats and land, and can access medical services easily. I was also able to make savings, share profits and pay laborers at the gardens for planting, weeding and harvesting”.

There was widespread belief among stakeholders that unlike before, women had some money and no longer had to run to their husbands for money to meet the basic needs. Other women could easily borrow money to deal with emergencies like sickness or paying school fees or even engage

in small businesses like selling vegetables. Furthermore, female beneficiaries were able to meet medical bills for themselves and their children. They use proceeds from the public works to access better medication from private clinics. As a result, there was a reduction in illnesses and opportunistic diseases. “Before NUSAF3, I used to sleep in a leaking house but now I sleep in an iron sheet house. With the savings from NUSAF am able to buy medicine whenever any member of my family falls sick.” Said a female beneficiary.

Another female beneficiary from Nwoya boasted; “Just come to my house, I have a huge radio, in the past who could think that a woman can have a music system. Now am blasting music in this centre. People come and dance here like crazy. For me, it is now a normal thing that I eat three times a day, before that I thought eating three times a day was just meant for a few selected. Now I even drink mineral water (laughs). Me I think now people in my home consider me useful because am helping to transport my old father to the hospital because he has to get medicine every Wednesday, he has some problems with his bones which pain a lot sometimes and he has been asked by the hospital to be going to the hospital every week”. Such examples show

that by economically empowering women, NUSAF3 went a long way in empowering whole households and communities. It is rare that a woman will earn income and only think about herself. While a number of men earned their money and used it on alcohol consumption, women carefully spent their earnings on household needs.

In the LIPWs both men and women participated in the public works and were paid equally. The women were also included on the leadership committees of the groups and were able to participate in decision making at the different levels. As a result, some female beneficiaries gained the confidence to join leadership in their communities and some even contested for elective political positions. The elderly and disabled, especially the women were also included as beneficiaries and they too were empowered as a result of participating in NUSAF activities. A disabled female elderly in the countryside was more likely to be at the bottom of the pyramid of the destitute, thus being identified and paid by NUSAF3 was a great feat. Such care restored hope and a strong sense of happiness in such women.

Women were involved in decision making at home and in their communities because NUSAF3 built their confidence and self-esteem in public speaking, interpersonal relations and leadership. "Women are able to make decisions particularly when they have their enterprise which is for the common good, and still women have taken up leadership roles not only in NUSAF3 but also political leadership..." noted the CAO of Budaka. The NDO of Lira noted that "... women have been seen to be better leaders and decision makers as compared to men..."



Once women earned money, their first priorities were always their children and family members

Unlike before, women took part in activities like road construction, brick laying and using ox-ploughs which were traditionally done by men. "...There are certain roles women have taken up which were in the past for men. Today women can rear animals and there are men whom I see being supported by women from amongst the beneficiaries. The gender roles have totally changed as is even evidenced in the group leadership where most treasurers are women..." noted the NDO of Nebbi District. Such a revelation suggests a strong shift not only in the perception of what women can achieve but also in the division of labor. In some parts of Karamoja, women were predominantly home and garden people – therefore rising into leadership, speaking up in public and helping their communities successfully implement projects was not a mean feat.

The women started and managed small-scale enterprises using the acquired knowledge and skills in saving, leadership, time management and planning. Cases like that of Florence in Kaberamaido and Stella in Amuria were found in many parts of the project area. These cases show that when a woman is empowered, the entire household will benefit.

The stories in spotlight 12 suggest that NUSAF3 played a central role in awakening the entrepreneurial potential of women, and itself entrepreneurship was a powerful tool of women empowerment. Therefore, given some resources, training and opportunity, women can choose a path to economic empowerment which paves way for other forms of empowerment. Florence and Stella did not only provide livelihoods for their families but they employed people, paid local dues, educated

children and supported whole supply chains. Above all, empowerment elevated their social status in society as well as in their families.

Key quantitative indicators of women empowerment

The evaluation posed a number of questions to the female beneficiaries particularly targeting to measure extent of empowerment. These questions were administered only at endline evaluation to give an indication of the extent to which female beneficiaries were empowered. The results are shown in table 37. It is evident that large proportions of female beneficiaries exhibited a good level of empowerment. For instance, while only 22.2% of the women had loans, 63% of these loans were acquired exclusively by the women, in

their names for personal investment. These women did not need the permission of their husbands to obtain the loans (64.2%). Furthermore, it is seen in table 37 that women's opinions were listened to by their husbands. Women were particularly listened to when the husbands needed to buy expensive items for the households (59.7%). This demonstrates the ability of women to influence expenditure patterns in their homes, especially when such expenditure required huge sums of money. In fact, up to 60% of the women beneficiaries had the power to make small expenditures and many of them could even refuse to give their husbands money for drinking alcohol (69.9%) and there were no repercussions. As well, women were involved in making decisions in their homes, especially with regard to allocation of assets between boys and girls in a household. Up to 77% of women beneficiaries believed that boys and girls deserve to share equally if the assets belong to the parents household.

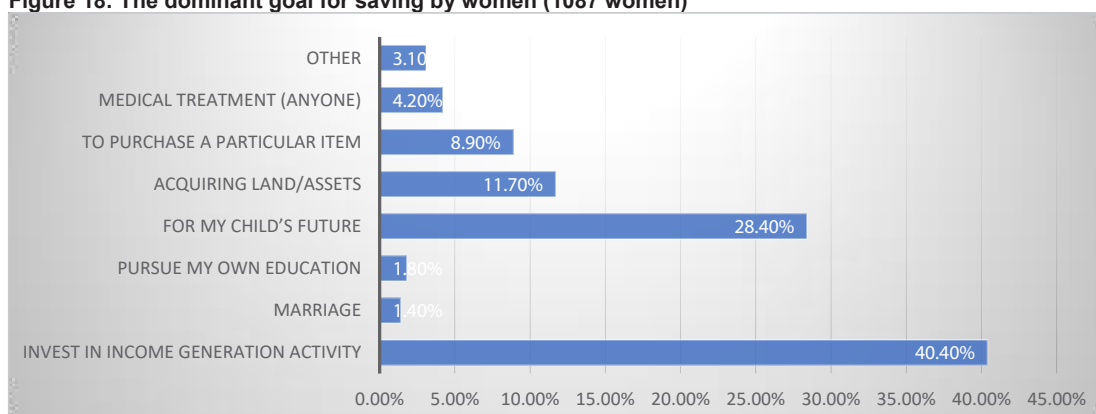
Table 37: Level of women empowerment

Indicator of empowerment	%
Proportion of women with an outstanding loan	22.20%
Loan in name of female spouse	63.00%
Female decision makers in obtaining loan	64.20%
Percentage of women with a specific savings goal	58.20%
Perception of allocating scarce resources equally between boy and girl children	77.10%
Proportion of women able to decide how to spend small amounts of money	60.10%
Proportion of women whose opinion is listened to when buying an expensive household item	59.70%
Proportion of women who do not need husband's permission to buy clothing for self or children	66.00%
Proportion of women who can refuse to give some money to their partner for alcohol	69.90%

Source: NUSAF primary data

It is further shown that up to 58% of the women beneficiaries saved their money with a specific goal. A total of 1087 women answered this question in the affirmative, and as seen in figure 18, the primary purpose of saving was to invest in an income generating activity. Such a finding is reflective of the women's desire to pursue economic independence as a business enterprise gives them the much-needed income. A look at the major reasons for saving money shows that women were generally development-oriented. The three major reasons for saving were to start a business, cater for the children's future (pay school fees), to purchase a specific item and to meet medical expenses in case any family member fell sick. They also saved in order to buy land and other fixed assets. These perceptions indicate a good level of financial and economic empowerment of the NUSAF3 female beneficiaries.


Figure 18: The dominant goal for saving by women (1087 women)



Source: NUSAF primary data

9.4 Contribution to Financial inclusion

The design of NUSAF3 fostered financial inclusion by supporting communities to open up commercial bank accounts and receiving their sub-project funds through the banks. Representatives of beneficiaries on every project operated a bank account, and even kept their savings in commercial banks. Accessing a bank account is considered a first step towards broader financial inclusion since it allows people to keep money, and send and receive payments. Groups that saved their earnings opened up bank accounts and regularly operated these accounts on their own. Some groups kept up to UGX70million. Several other beneficiaries used NUSAF3 incomes to buy cell phones which allowed them to access and use mobile money services. The VRF model of NUSAF3 served as a village level bank in which the poor households kept money and accessed quick loans for their household and business needs. These VRF groups kept their funds in commercial banks and collectively they saved up to UGX15billion into the financial system. Others relied on village saving and lending associations which also advanced members credit and allowed savings. These services facilitated day to day living, as well access to finances for investment in business, children's education, health and household shocks. Beneficiaries used their savings to access better medication from private clinics and clear medical bills for themselves and their family members.



“The organising of people into small groups is making some group savings grow into SACCOSs. The women, youths and PWDs can access credit and loans to start business”. CAO, Adjuman district

“Household savings have improved because families now work together and save their small incomes in either village SACCOs or banks”. RDC Tororo District

9.5 Attitudinal change to work, investment and productivity

There have been positive attitudes towards work, investment and productivity. NUSAF3 taught the beneficiaries that both the women and men could collectively work on a project like opening the access roads under the LIPW and both be paid for the work done. Before NUSAF3, majority of the communities would dig using hoes which meant that the gardens were small and this also affected the yields. Now with the ox ploughs and oxen given to the beneficiaries by NUSAF, they are able to open large pieces of land and grow more crops hence bigger yields which translated into more money once the produce was sold.

As a core principle of NUSAF3, the beneficiaries learnt and appreciated the benefits of saving and belonging to savings groups in their communities. They were able to save some of the money they were paid and could borrow against their savings to shoulder some emergencies like sickness and later pay back the monies borrowed at a small fee. Others were able to acquire household items like mattresses, radios, livestock and even buying animals like goats and pigs for sale after the various trainings they received from NUSAF. It is thus key to note that training and participation in NUSAF3 greatly improved peoples' attitudes towards work and savings.

The beneficiaries under IHISP were able to open up large gardens as a result of working together in groups as well as using ox ploughs. This enabled them to produce more products and also sell their produce at a better price because they were able to negotiate better as a group. One member of a group for example commented; “Before NUSAF3, we were using manual labour but after receiving ox-ploughs and oxen for land opening, there is increase in yield. Those days when NUSAF3 was not there we used to eat one time a day or at times no food. Now we are able to eat three times. The food we eat now is a balanced diet, we eat fish, beans, posho and meat. See we are even roasting fish for lunch there”. These same beneficiaries learnt that they could provide labour and be paid and use the money to acquire assets. “When we hire out labour we earn money which we use to pay school fees, buy livestock, spare parts and save the rest. Before NUSAF3 I had one cow after my earnings from hiring out labour with Ox-plough I bought three cows and they have now increased to 6” noted one beneficiary.

They can also participate in income generating enterprises from which they could sell their products and later invest the money from the sales in other enterprises that would fetch more income for their households.

Chapter Ten //

Environmental management, stakeholder satisfaction and impact on SDGS



10.1 Introduction

The conceptualisation of NUSAF3 embedded environmental management as a key element in dealing with the root causes of disasters as well as helping in sustaining several interventions. Therefore, every project had an element of environmental management. Additionally, measuring satisfaction of the stakeholders is important as it highlights what people are happy with and what they do not like. This is key in planning future interventions. This chapter focuses on assessing the impact made on the environment, the sustainable development goals (SDGs) and stakeholder satisfaction.

10.2 Environment and Natural Resource Management practices

It should be stated that measuring the impact of NUSAF3 on the natural environment was well beyond the scope of this evaluation, and making meaningful conclusions requires an assessment after at least ten years beyond project closure. Nevertheless, the evaluation team makes an attempt to assess the environmental management practices among the beneficiaries and make an opinion on the likely longterm impact.

In some of the communities, tree planting was successfully carried out except in a few areas where the seedlings dried or were eaten by livestock. Tree planting helped to beautify and conserve the environment as these trees help to protect against heavy storms and also reduce soil erosion. The Kakoli Institutional Greening Subproject at Naboa Subcounty in Budaka district turned the entire school green, creating sheds for children during breaks and as well turning a bare football pitch into a green one. This activity reduced surface runoff and the associated tree planting not only provides fresh air but also breaks the strong winds during rainy seasons. The head teacher and several teachers of the school attested to this benefit, arguing that the benefits are expected to be even stronger when the trees become fully grown. As a result of this project, community sports activities were conducted at this school and in turn enrolment of children in the school has tripled since the project started.



Kakoli Institutional Greening, Budaka District

Because of the trainings, the communities realised the benefits of tree planting and so nursery beds were established. Some groups even took up nursery beds as their source of income as they would plant tree seedlings and sell them to others who then planted them. In so doing, the number of trees planted increased which implies that in these areas, soil erosion and heavy storms are likely to be managed in the future.

During the opening of community access roads, the environmental officers would ensure that the negative effects of the roads on the environment were mitigated. Trees were planted along the roads and the communities were trained on how to maintain the roads and avoid letting the roads be trampled on by livestock. The communities were also taught to use terraces to address the issue of soil erosion as well as trained in better farming methods like the various pesticides and herbicides to use which did not have adverse effects on the environment. This was particularly evident in the Elgon region where communities learnt and dug terraces, contours while planting trees. In Manafwa, a whole community identified soil erosion as one of their main problems and embarked on a project to plant trees on the entire hill. As seen in the pictures below, the trees successfully grew up and significantly reduced surface run off. Community members were sponsored to visit several sites in Kabale to learn how to dig contours and terraces to control erosion. When the trees were younger, the members successfully grew food on the hill, something that happened for the first time in generations. There were several testimonies of improved air quality in this community, and all believed that their new forest played a part. To strengthen benefits from the forest, the community members were planning to rear bees in the forest in order improve on pollination of the food crops and harvest honey.



Environmental Restoration in Manafwa









Environmental Restoration in manafwa


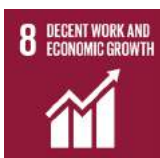




Water conservation supporting agriculture in Tororo District

10.3 NUSAF3 Contribution to the Sustainable Development Goals (SDGs)

NUSAF3 contributed to 10 out of the 17 SDGs. The contribution is summarised below:

Goal	Contribution
Goal 1: No Poverty 	NUSAF3 has supported communities out of poverty by providing employment in Labor Intensive Public Works. Econometric evidence indicates that poverty rates reduced significantly and people's welfare improved. NUSAF3 supported the poorest of the poor to start, manage and grow business enterprises.
Goal 2: Zero Hunger 	NUSAF3 supported block farms, provided oxen and money to buy food hence reducing hunger and related effects like death. Vulnerable households accessed enough and nutritious food with three meals a day. Consumption of more than two meals a day improved across all the regions where NUSAF3 operated. The project rapidly responded to drought disasters through disaster risk financing in Karamoja. This helped whole communities to smoothen food consumption during disasters.
Goal 3: Good Health and Well-Being 	The project supported vulnerable communities to have money to access better health facilities and services. Expecting mothers are now having access to ante-natal services because of opened access roads which enable them to move to health facilities. The requirement to improve sanitation in form of having a drying rack, separate cooking area, pit latrine and waste disposal area improved sanitation and reduced the incidence of disease among NUSAF3 beneficiaries.
Goal 4: Quality Education 	Communities got money to pay school fees for their children buy uniforms and scholastic materials. This increased school enrolment and retention among NUSAF3 beneficiaries
Goal 5: Gender Equality 	Both men and women were encouraged to work together for income in the different project components, with women constituting 55% of the beneficiaries. Women contributed to household needs and some took leadership positions in groups and communities. Women were paid the same amount of wage as men. Women that participated in NUSAF3 committee leadership were able to speak in public and actively participated in savings group activities. Some of these took up leadership roles in the church while others contested for local council elections.
Goal 6: Clean Water and Sanitation 	NUSAF3 sensitized and supported communities to dig water dams, giving them access to clean water. There was improved sanitation and hygiene with reduced open defecation resulting from sensitization and digging of latrines.

Goal 7: Affordable and Clean Energy 	Communities got money and installed solar panels, energy saving cooking facilities complementing to natural resource conservation.
Goal 8: Decent Work and Economic Growth 	The project ensured productive employment for all vulnerable women and men, including young people through public works and LIS. They got involved in savings groups, got loans and invested in their businesses and used proceeds for further investment which contributed to decent Work and Economic Growth.
Goal 10: Reduced Inequality 	NUSAF3 has bridged the gap between the poor and the rich as a way of reducing inequality through providing wage-based labor to the poorest of the poor and active poor people. Communities have been empowered for social, economic and financial inclusion through relevant trainings, cash disbursements and conducting exposure visits. The focus on northern Uganda which has a history of prolonged war and natural disasters significantly helped in bridging the development gap between the north and the rest of the country.
Goal 13: Climate Action 	The project has supported communities to address the adverse effects of climate change and also ensure resilience and adaptation to climate change. This has been done through supporting tree planting in homes, schools, churches, along water bodies and local government compounds. There has been strengthened resilience and adaptive capacity to climate-related hazards and natural disasters in the project area. In addition, NUSAF3 is supporting communities with climate-smart agriculture which is enhancing adaptation to climate risks, improving agricultural productivity and providing effective response in the event of a crisis. Karamoja Elders Association and women groups in Teso sub regions conducted awareness raising on environmental conservation.

10.4 Stakeholder satisfaction with NUSAF3

This section looks at the satisfaction levels of the various stakeholders such as the local leaders, the administrative organs, the beneficiaries and the communities. They were all asked if they were happy with NUSAF3 and if so, why they were happy.

Beneficiary satisfaction levels

Beneficiaries were generally happy with NUSAF3. Majority were happy that they are now able to do or afford things they could not do or afford before NUSAF3. Some beneficiaries said that before NUSAF 3 they could not afford even 50,000/= but now they can have savings of up to 500,000/= which means that when they get a problem, they can easily solve it without going to other people as one woman beneficiary commented; “NUSAF brought for us peace. *“Before NUSAF I didn’t have money even 30,000/= but now I have over 500,000/= from the ox ploughs”*. Because of NUSAF, their children can now go to school since they can now afford school fees and scholastic materials. They can access hospitals as a result of the

open access roads, and even live healthier lives due to the improvement in nutrition and change in diet. Transportation to markets and trading centres has greatly been improved and now farmers can get better prices for their produce.

Some beneficiaries however noted their dissatisfaction with the project. There were a few things that they were not happy about but these were mainly with the implementation process for example the delays in releasing money to the beneficiaries or supply of seeds which sometimes affected yields because some were supplied at the end of the season. Others were not happy about the watershed approach where only members of a given watershed got to benefit from the project leaving out the others which to them was discriminatory and a potential cause of conflict.

Local leadership satisfaction levels

The local leaders are generally satisfied with NUSAF 3 because of the impact it has had on their communities. They attest that there is visible improvement in the livelihoods of the people as they can now afford basic needs like food, medicine, clothing among others. The leaders also noted that NUSAF simplified their work of implementing government projects because of the numerous sensitisations that NUSAF gave its beneficiaries.

Local Administration satisfaction levels

The local administrators like the Chief Administrative Officers and the community development officers expressed satisfaction with the project. They were happy that the project had eased their work through training the beneficiaries on the objectives which made their implementation much *easier*.

Drivers of satisfaction among stakeholders

Involvement of the communities in the activities of the project such as group formation, managing their finances and procurement processes as well as monitoring some of the projects at group level. Flow of funds to the beneficiaries was good.

The NUSAF 3 targeting mechanism where the poorest of the poor such as the elderly and the disabled were targeted to benefit from the project was also a driver of satisfaction. The beneficiaries were mostly happy that NUSAF 3 had given the ability to do the things they previously could not afford to do for example, while majority could not take their children to school before NUSAF 3, they

are now able to do so. They are also able to change diet and also have at least 3 meals a day as a result of the increased food security and diversification in agriculture.

Improved road access: the community roads opened under the LIPWs eased accessibility of the social services such as schools, markets, hospitals and recreation centres by both the NUSAF 3 beneficiaries and non-beneficiaries. This implied that one could now easily move to these centres in less time and with less difficulty. The farmers were also able to transport their produce to the markets directly and sell at a better price than before where they were usually cheated by the middlemen.

Improvement in household incomes, health and sanitation: NUSAF 3 has led to improvement in household incomes, health and sanitation. Because of their involvement in income generating activities like selling vegetables, riding motorbikes “bodabodas”, produce buying and selling among others, the beneficiaries were able to have a sustainable income source and many of them could now afford the basic needs. Many households had the minimum hygiene and sanitation requirements like pit latrines with water, drying racks, and were maintaining them as per the guidelines they were given during the trainings. A few beneficiaries had even constructed permanent toilets. This led to better health as the contagious diseases were reduced.

Job creation: NUSAF 3 created jobs for the community facilitators who were the implementors of the project. Beneficiaries under the LIPW were also employed by NUSAF to open access roads as well as by the groups under IHISP to dig on their farms. Also, as a result of the income generating projects, some beneficiaries acquired assets like motorcycles, grinding mills etc. and would employ other beneficiaries.

Team work and cohesion: the NUSAF design and structure required that the beneficiaries work in teams. Even when oxen were given, the beneficiaries had to pair up to be able to use them. Beneficiaries learnt the importance of working together hence achieving more. As a result, friendships and mutual relations were created. The groups became some kind of families working together to achieve more. Even when other non NUSAF projects came to the area, these groups would end up registering for

them and benefiting from these projects without necessarily forming new groups.

NUSAF 3's major objective was to provide effective income support and build the resilience of poor and vulnerable households in Northern Uganda. This was achieved as majority of the beneficiaries are now able to sustain themselves without necessarily waiting for Government handouts. Some even

noted that they were able to go through the COVID 19 lockdown period because they had stored some food. There have been noticeable changes in the livelihoods of the beneficiaries and many can now withstand some shocks of life, and majority of the people can now sustain their families.



NUSAF3 installed water irrigation system for coffee growing in Timu, Karamoja

Chapter Eleven //

Contribution of staac to NUSAF3 performance



11. Introduction

The first phase of the Northern Uganda Social Action (NUSAF 1) was implemented without a concrete and consistent framework for ensuring transparency and accountability practices. In NUSAF2, the Office of the Prime Minister (OPM) gave due consideration for a comprehensive plan to incorporate a pillar that would ensure that citizens and duty bearers were transparent and accountable when handling government resources. A Transparency, Accountability and Anti-Corruption (TAAC) Component was introduced. In the third phase – NUSAF3, the project design strengthened the previous initiatives, thus the name of the component; Strengthening Transparency, Accountability and Anti-Corruption (STAAC). The objective of the STAAC component was to contribute to the government's commitment to increasing transparency and accountability in public service delivery. STAAC aimed to reduce misuse of project resources, fraud and corruption in the delivery of government programmes and services through four main strategic interventions: (I) community sensitization and awareness, in order to (II) enhance citizens' and stakeholders' engagement, including in (III) monitoring and inspection of project activities, and where necessary (IV) carry out enforcement activities such as investigations and prosecution.

This chapter provides an assessment of the effectiveness of STAAC strategies, specifying the processes and means through which the component's objectives were realized. The chapter also provides an overall contribution of STAAC to the achievement of the other NUSAF3 components.

Unlike the other components of NUSAF3 which had baseline and midline evaluations, the Inspectorate of Government (IG) did not conduct baseline and midline evaluations for STAAC. For clarity, STAAC was implemented independently by the IG. The implementation of the component did not adopt the approach of an experimental and control group, which would have allowed for a randomized control trial (RCT) evaluation design. Therefore, the evaluation team decided to conduct only an endline evaluation, comparing NUSAF3 beneficiaries with non-NUSAF3 beneficiaries within the same location. For example, while making observations on Transparency and Accountability practices; the evaluation approach was to compare such practices between NUSAF3 beneficiaries and non NUSAF3 beneficiaries within the same location. Similarly, on who was more likely to be a victim of

corruption in the community, the evaluation made comparisons between NUSAF3 and Non-NUSAF3 results. In that way, conclusions were drawn to the effect that the NUSAF3 beneficiaries had better or worse performance or even insignificant differences between the two groups in terms of the set project indicators.

The evaluation team conducted a household survey of 4,230 NUSAF3 supported households. The team also conducted another survey 649 households which not NUSAF3 beneficiaries but using the same tool as the one used on beneficiaries. Additionally, 161 separate FGD (93) and Key Informant interviews (68) were conducted.

11.2 STAAC main outcomes and intermediary outcome

a) Empowering citizens to reduce vulnerability to corruption

A 2020 IG Integrity Survey by the IG revealed a high level of awareness (~80%) about the various forms of corruption. Findings further indicate that citizens in areas where social accountability interventions was implemented since 2009 e.g. Northern Uganda, were more knowledgeable about corruption, the IG, and its efforts to fight corruption, than those from other regions e.g. Western Uganda, where the component had never been implemented or was only recently introduced.¹⁶ The high level of awareness about corruption and where to report was corroborated by 92% of respondents involved in focus group discussions and key informant interviews. In one of the submissions made during a FGD, the stakeholders appeared to suggest that the information disseminated by the IG had taken a stronghold in the minds of the beneficiaries;

“Corruption is not something new to them (the beneficiaries) because they were trained and they are very concerned about cases of corruption not only in their projects but even the non NUSAF3 projects”, SIST FGD, Adjumani District .

¹⁶ Take for instance 48.8% in Northern Uganda Vs. 40.9% in Western Uganda had heard about the IG; 61.5% in Northern Vs. 55.0% in Western Uganda were aware of IG efforts to fight corruption

Similar sentiments reflecting positive attitudinal change towards the IG and promoting transparency and accountability by community members were shared by other stakeholders including technical support teams, and in all the 23 districts visited by the evaluation team. More importantly, There was evidence from the evaluation to show that by creating awareness about: corruption and the role of the IG in combating corruption, including in NUSAF3 project; as well as about citizens' responsibility to demand for transparency and accountability from public officials and other duty bearers; the IG empowered sections of the community, especially NUSAF3 project participants, to the extent that they were able to guard themselves against various forms of corruption.

Table 38: Summary table showing experience of corruption

Forms of corruption experienced	NUSAF Household	Non-NUSAF Household	Chi-square (P-value)
Bribery	15.2%	21.7%	16.516 (0.000)
Solicitation	7.9%	13.5%	20.663 (0.000)
Embezzlement	9.3%	13.8%	11.778 (0.001)
Diversion of public resources	8.7%	12.5%	9.585 (0.002)
Nepotism	8.3%	13.2%	15.219 (0.000)
Favouritism	13.8%	23.5%	1.161 (0.000)

Source: NUSAF primary data

The results in table 38 reveal that Non-NUSAF beneficiary households were more likely than NUSAF beneficiary households to experience or be victims of bribery, solicitation, and embezzlement, diversion of public resources, nepotism and favoritism, by a significant magnitude. Although the proportion was small, generally below 15% for NUSAF3 beneficiaries, exposure to corruption existed, especially bribery (15%), favouritism (13.8%) and embezzlement (9.3%). NUSAF3 leadership reported a number of these cases through the designated IG and project structures. It was established that about 40% of the reported cases were complaints about the project. Among Non-NUSAF3 households, the figures were 22.8% NUSAF3-related complaints.

The complaints registered were about the following public offices or services, ranking from the highest to the lowest number of complaints registered: the police, health facility, local council, district local governments, sub county local governments, community facilitators, agriculture extension services, municipal town councils, schools, CMGs and the IG. Further analysis showed that NUSAF3 households or sub project groups were less likely to tolerate corruption than their Non-NUSAF counterparts. In a sub project survey, results showed that 80% of NUSAF3 sub project beneficiaries reported complaints to the CMGs, while only 50%

of Non-NUSAF3 sub project beneficiaries did the same. Arising from a greater level of interaction with, or involvement in the work of the IG, 72% of NUSAF3 project beneficiaries confessed that they were satisfied with the anti-corruption work of the agency. By contrast, the same sentiment among Non-NUSAF3 beneficiaries was at 52%.

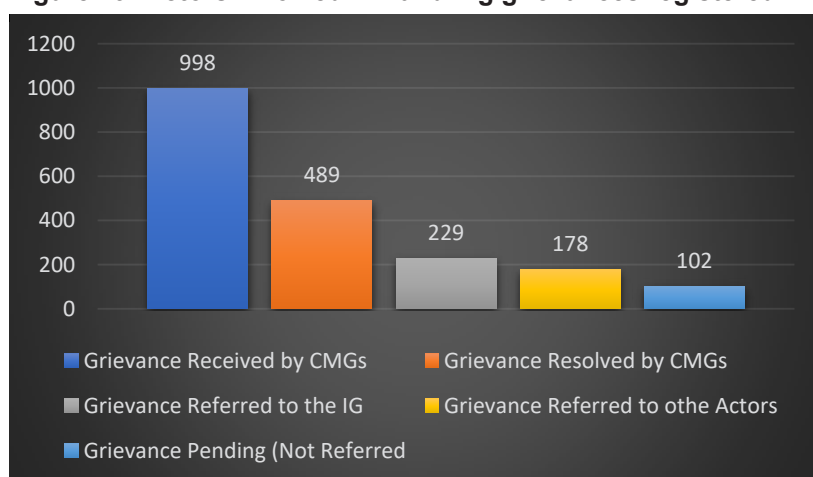
Despite the foregoing revelations, a number of NUSAF3 beneficiaries mentioned that they were not aware of corruption and the measures put in place to control it. "As a group we are not aware of ... the measures put in place to fight corruption", FGD, Community Interest Group, Bulisa District. Thus, despite the fact that such views formed only 8% of the evaluation participants, and contrary to the popular affirmation that the community had great awareness and that the direction of their attitudinal change tended towards positivity, the minority view suggests that more actions should be taken by duty bearers.

b) Greater citizen involvement in promoting transparency and accountability in NUSAF3 and other public service delivery

The investment in training and support supervision for CMGs was informed by the learning from the previous social accountability impact evaluation

report which revealed that “stronger community monitoring [was] the main channel through which the social accountability and community monitoring intervention led to improvements in community sub projects” (, p.43). Consistent with this observation, this evaluation also found that CMGs were instrumental in ensuring that NUSAF3 sub project groups were receiving quality project input and supplies, and more likely to report issues to the Inspectorate of Government. According to the CMG records books, every CMG had visited and supported at least 3 NUSAF3 sub projects by the time of the evaluation in December 2020. Sub project survey results corroborated this evidence, with 87% of sub project groups reporting that their projects had been monitored by CMGs. On average every CMGs group recorded at least 3 grievances annually, and resolved at least 50% of the total grievances registered, referring the rest to other actors. 72% of the groups visited by CMGs reported that they were satisfied with the work of the CMGs.

Figure 19: Actors Involved in handling grievances registered with CMGs



The efforts of CMGs in the project was so widely acknowledged during the evaluation. In 10 different districts, the NUSAF3 beneficiaries and stakeholders engaged through FGDs and KIIs referred to them as “the small IGG” or the “IGG eyes” – a phrase that suggested the role they played was more or less an extension of the mandate of the IG. To further demonstrate the likeness of the

CMGs with the IG, the NUSAF3 beneficiaries in Kapchorwa district in an FGD put it clearly that the “CMGs are always in the community and called themselves the IGG”. Even more remarkable were the positive practices that had been gradually induced as a result of the specific tasks that the CMGs had accomplished over time. From among the beneficiaries of the various sub projects, there was a culture shift with beneficiaries becoming more and more aware of detrimental elements within their respective projects. This shift was further demonstrated by the level at which project participants reported complaints to the CMGs, with NUSAF3 sub project beneficiaries demonstrating higher levels of intolerance to malpractices. By providing spaces where sub project beneficiaries would adapt to the positive practice of reporting complaints, the CMGs raised the standard for a number of other good or positive practices in the way that sub projects were managed. CMGs also mobilized and engaged NUSAF3 project stakeholders and other citizens through a process of dialogue over 1,500 community score card meetings/session. The community score card produced significant positive outcomes for all the TAAC component strategies by promoting transparency, participation and accountability through interface meetings and joint action planning with duty bearers to address concerns raised by project participants and public service users.

A key and persistent concern or gap about the work of CMGs that the community and district level stakeholders brought to the attention of the evaluation team was that of poor facilitation. It is in regard to how vehemently CMGs and other stakeholders expressed their fear, that we recommend the IG and other stakeholders should be mindful over heightened expectation of voluntarism. As a case in point one such view came from a community facilitator in Nwoya district, highlighted in spotlight 11.



Spotlight 11: CMG Facilitation, a key challenge as viewed by the Community Facilitator, Nwoya District

When they were recruiting them, I think CMGs, in their training they were told that they would be monitoring government projects, of which NUSAF was one of them. At first, they were doing a very good job. They used to help us (community facilitators) monitor the sub projects. Where there were issues, they would also come in and then talk to the members, they would also give reports to the IG. But there came a time where I think when they were now 1 year old in the project, the issue of facilitation of their work came up. They said they could not move in all the projects, check the projects, monitor the projects without facilitation. So, when they saw that they were not getting any support most of them ran away from being CMGs and wanted to be beneficiaries. That was the biggest challenge, the biggest blow to the team. So, their biggest challenge was that there was no facilitation so they dumped their work, they ran away, they left it, they wanted to become beneficiaries. Others are still there up to now, and when you call them, they will come but it's very hard now to work with them because they are not being facilitated. So, the purpose for having them was good but the issue of facilitation was a problem.

Peculiarly, even with such a concern as highlighted in spotlight 11 arose in three NUSAF 3 supported districts, CMGs were highly functional. To draw such a conclusion, through observation of the 304 CMG record books in December 2020, the evaluation team learnt that out of 1200 CMG members who received the IG supported training, 81% had remained active, i.e., they had continued to attend scheduled monthly meetings and participate in monitoring of NUSAF3 sub projects. Further, 100% had grievance record books which had records of cases registered with the latest record dating November 2020. Thus, as demonstrated, the citizen engagement strategy applied by the IG generated positive outcomes that established the foundation for positive practices among community members in regards to sub project compliance and management. What may need to be addressed however for similar future intervention is the question of motivation of a voluntary community structure such as the CMGs. Amidst the commendable performance, in some cases, the CMGs showed exhaustion and despair especially where there were many monitoring activities to be conducted yet there was no facilitation. Paying attention to such matters could build on earlier lessons or even lessons from other actors who rely on voluntarism of community structures.

c) Improved quality of sub projects through compliance monitoring and inspections

In addition to the community-based monitoring of NUSAF3 sub projects by CMGs, the IG also independently conducted a structured monitoring and evaluation of 6,535 sub projects to check for compliance with guidelines. Inevitably therefore, these visits were also used to assess for transparency, beneficiary participation and accountability in the implementation of NUSAF3 sub projects. The evaluation adopted a similar tool in order to map out the pathway by which TAAC and/or the design of NUSAF3 sub projects ultimately improved the quality of sub projects.

Table 39: Summary table showing availability of project guiding documents

Guiding documents for (Yes Responses only)	NUSAF Beneficiary	Non NUSAF beneficiary	Chi-square (P-value)
What to be done	96.7%	71.0%	120.017 (0.000)
Location	95.9%	70.6%	109.819 (0.000)
Duration	95.1%	68.4%	111.465 (0.000)
Procedure and approach	93.6%	64.5%	115.720 (0.000)
For whom	96.2%	66.2%	143.199 (0.000)

Source: NUSAF primary data

Findings in table 39 show that there was a significant difference in the level of transparency and awareness, participation and accountability between NUSAF3 and Non-NUSAF projects implemented within the same community at project design/identification and during the implementation of community sub projects. Over 95% of NUSAF3 sub project participants confirmed that their project had guiding documents for the what they were supposed to do (activities), where the sub projects or activities would be implemented (location or choice of location), when to conduct sub project activities (duration, work plan and schedule), how (procedure and approach) sub projects would be implemented, and; for/with whom (participants, stakeholders and beneficiaries, including roles and responsibilities). The level of transparency and awareness at project design, as determined by the same criteria aforementioned averaged at 68% for Non-NUSAF3 project.

It was also more likely for NUSAF3 project beneficiaries (92.3%) than the beneficiaries of other projects (62%) to report that they were consulted or participated in the decision about sub project activities. A statistically significant difference was reported among NUSAF3 and non-NUSAF3 sub project participants for participation in each of the following subproject design/identification decisions: what to be done (objectives, activities); where and when (location and work plan/schedule) to conduct sub project activities identified; how (procedures and approach, including beneficiaries own contribution/capabilities) to implement sub project activities; costing and budgeting (including beneficiary contribution); risk analysis and discussion of mitigation measures, and; discussions about alternative sub projects/enterprises or actions and choosing the best option (prioritizing).

Table 40: Availability of project accountability mechanisms

	NUSAF Beneficiary	Non-NUSAF beneficiary	Chi-square (P-value)
Group members know where to seek guidance	92.7	63.6	108.898 (0.000)
Group members know where to report a complaint	92.3	61.0	120.569 (0.000)
Was there a platform for group leaders to respond to complaints?	88.2	55.4	109.840 (0.000)

Source: NUSAF primary data

Similarly, the evaluation revealed more regard for accountability at project design/identification for NUSAF3 sub projects (91%) in comparison with other Non-NUSAF3 projects (60%). A statistically significant difference was observed between NUSAF3 and Non-NUSAF3 projects in regard to knowledge of where to seek guidance, ask questions and get clarification about the sub project knowledge of where to report a grievance/complaint e.g. non-compliance with guidelines, mismanagement, resource wastage, misconduct, fraud, bribery, corruption; and availability of platform for group leaders, service providers/suppliers & sub-project implementers to respond to concerns/grievances from the group (table 40). Overall, NUSAF3 beneficiaries were far more knowledgeable than their counterparts in other projects.

An assessment of transparency during implementation revealed that NUSAF3 sub projects were more transparent or compliant in: the procurement of goods and services; disbursement of sub-project funds; implementation of sub-project activities and in providing accountability (including financial and narrative reports); than Non-NUSAF3 project counterparts. Detailed results are shown in table 41.

Table 41: Beneficiaries' knowledge of sub project finances

	NUSAF Beneficiary	Non NUSAF beneficiary	Chi-square (P-value)
All know (Subproject costs & budget)	51.8	29.0	102.534 (0.000)
Some know	39.2	33.3	
All know (Fund disbursement)	59.8	36.4	122.889 (0.000)
Some know	33.8	27.3	
All know (expenditure and accountability)	65.2	42.0	117.310 (0.000)
Some know	29.3	24.2	
All know (availability financial records)	62.6	40.7	130.559 (0.000)
Some know	31.5	22.5	

Source: NUSAF primary data

The average rating for affirmative responses on a Likert scale containing 'always' and 'often' was 95% for NUSAF3 project beneficiaries and 65% for Non-NUSAF3 projects. It was also more likely for NUSAF3 beneficiaries to know more about sub project: costs and budget; how funds were disbursed and when; how finances were spent and accounted for; and availability of financial records than their Non-NUSAF3 counterparts. Average rating for positive responses on a Likert scale containing 'all[beneficiaries]' and 'some[beneficiaries]' was 93% for NUSAF3 project groups and 64% for Non-NUSAF3 project groups for questions measuring the aforementioned (four) criteria.

Table 42: Value for money assessment of NUSAF3 projects

Value for money on subproject, Did:	NUSAF Beneficiary	Non NUSAF beneficiary	X ² (sig.)
¹⁷ Cost of input compare favourably to quality of input?			
Always	66.8	40.3	129.505 (0.000)
Often	27.9	25.1	
Cost of input compare favorably with market prices?			
Always	51.6	30.7	103.369 (0.000)
Often	39.2	30.7	
Quality of services provided or work done compare favourably with the quality & quantity of sub project input?			
Always	67.3	43.7	130.237 (0.000)
Often	27.0	19.9	
Subproject achieve its intended results? Always	50.2	28.6	114.027 (0.000)
Often	41.2	32.0	

Source: NUSAF primary data

The results from additional analysis also show that there were equally more NUSAF3 sub project groups reporting value for money for their sub projects than Non-NUSAF3 sub projects. In order to assess value for money, the evaluation asked: (1) whether the cost of project input compared favorably¹⁸ to quality of input procured; (2) if the cost of inputs compare favorably with the market prices in the sub-project area; (3) if the cost of inputs compare favorably with the market prices in the sub-project area, and; (4) if group members interviewed felt their sub-project achieve its intended results. The average affirmative response (either 'always' or 'often') to the four value for money questions was 93% for NUSAF3 sub projects and 63% for Non-NUSAF3 sub projects.

About 94% of NUSAF3 sub project groups reported that their members were involved in the implementation of the project including in the procurement of goods and services, contributing resources e.g., labor, land, raw materials, maintenance work; conducting sub project activities and reporting about activities conducted, and; accounting for finances spent including reviewing financial records. By comparison, Non-NUSAF3 sub project group members' participation as assessed by the same five criteria averaged at 64% for 'always' and 'often' responses. Sub project group members' participation in monitoring sub project implementation stood at 94% for NUSAF3 sub projects and 62% for Non-NUSAF3 projects. This was in response to the questions regarding: the participation of CMGs, CSOs, Local Leaders, Group Leaders or community groups in monitoring sub project activities; the approval of group members of how finances were spent and accounted for (financial monitoring); approval of the use of subproject resources; involvement/participation in discussions about progress and challenges, and; deciding actions to be taken to improve the subproject or to facilitate project success.

Table 43: Records and filing sub project documents

Whether key sub project documents on record and properly filed?	N U S A F Beneficiary	Non NUSAF beneficiary	Chi-square (P-value)
Procurement (All)	54.6	26.0	130.757 (0.000)
Some	34.0	27.3	
Financial records (All)	68.1	37.7	118.807 (0.000)
Some	26.3	30.3	
Reports on activities conducted (All)	55.7	28.6	116.013 (0.000)
Some	36.0	33.3	

Source: NUSAF primary data

It was also more likely for NUSAF3 sub projects (92%) to keep records or files e.g. regarding for the procurement of goods and services, financial records such as accountabilities and bank statements, and reports on activities conducted than Non-NUSAF3 sub projects (61%).

Overall, the results of the sub project survey revealed that the STAAC component did improve the quality of sub projects, even though a lot of this credit should also be attributed to the NUSAF3 project design in itself. The whole project was designed to be transparent, have greater participation of beneficiaries and promote accountability and not just because of the involvement of the IG in the project. Such a design provided a strong basis for the IG to enforce compliance during its monitoring and inspections.

d) Enforcement of anti-corruption measures for impact in NUSAF3 service delivery

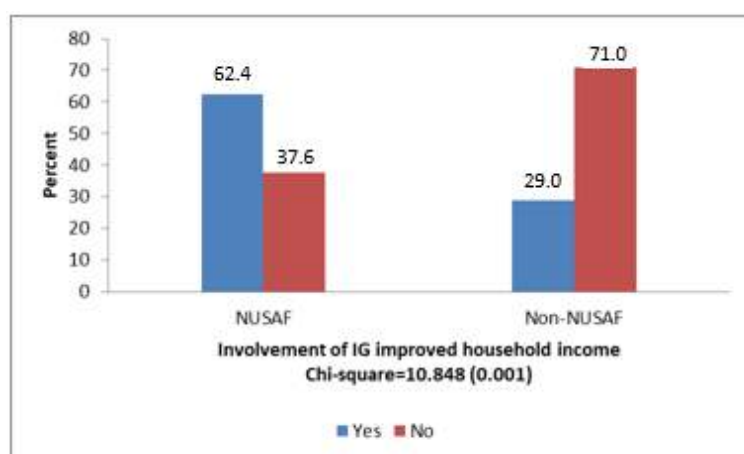
TAAC was conceived as means through which NUSAF3 would deliver better project impact. In order to accomplish this objective, the component sought timely redress where it failed to prevent the abuse, loss or embezzlement of the project resources. As one IG Official summarized the component in their own word, "ultimately STAAC is about identifying and resolving grievances...it is about clearing obstacles that could have affected the project before, during and after the implementation of NUSAF3 project activities in order to enable the project achieve its objectives and Goal." It is against this backdrop that having

¹⁸ Less than or equal to the market price at the time

presented evidence to show that the component realized its intermediate objectives or outcomes that the evaluation delved into one final inquiry. We sought answers to the questions: Did STAAC lead to better livelihood and/or wellbeing outcomes for NUSAF3 project beneficiaries? If so, what is the concrete evidence? If not, why not? The subsequent presentation therefore explores the impact of STAAC beyond meeting its own objectives.

The evaluators conducted a perception index analysis in order to help us respond to the main impact evaluation question above. The analysis involved the assessment of the views and opinions of project participants regarding the contribution of the component regarding three key project outcomes: improve household incomes, increased valued of household assets, and improved household resilience. Practically, where a community interest group or a self-help group received an income generating support, or the beneficiary households of either LIPW or DRF received wages for their labor, we inquired whether this led to positive changes in the three outcome areas aforementioned. Thereafter, the evaluators assessed whether and how any such changes or improvements in household income and/or assets and/or resilience were associated with the work of the IG (or STAAC component. To determine the impact, we compared the results between the NUSAF3 beneficiary households to Non-NUSAF3 beneficiary household, and present the results below.

Figure 20: STAAC contribution to household income



In response to the question, “Did the involvement/work of the IG in NUSAF3 contribute to improving your household income?” Two third of NUSAF3 beneficiaries said it did. Less than a third of Non-NUSAF3 beneficiaries were of the same view. The IG or STAAC component contribution to improving household income was attributed to the fact that it: Saved money that would have been lost (45.6% NUSAF3 Vs. 66.6% Non-NUSAF3); enabled project beneficiaries to receive all the money that was due to them (23.5% NUSAF3 Vs. 22.2% for Non-NUSAF3); recovered money that would have been lost (10.3% NUSAF3 Vs. 0.0% for non-NUSAF), and hence ; increased productivity (11.8% NUSAF3 Vs. 11.1% for Non-NUSAF). 8.0% of NUSAF3 project participants attributed the contribution of the IG to improving their household income to other unspecified reasons. Similar results were observed, and reasons advanced, for the contribution of the IG or STAAC component to improving the value of the household assets (54.1% NUSAF3 Vs. 22.6% Non-NUSAF3) and; improving household resilience (53.2% NUSAF3 vs. 19.4 Non-NUSAF3). The evaluation results further showed that NUSAF3 project beneficiaries were more likely (69.2%) to attribute their optimism about the future to contribution of the STAAC component, than the beneficiaries of other projects (41.9%).

Evidence from STAAC progress reports confirmed that the reported contribution of the IG towards improving the wellbeing of citizens, especially NUSAF3 project participants was not surprising. This is because by the time of the evaluation, the component had received 2,015 grievances from whistleblowers, during compliance monitoring and inspection visits and through the community score card. 75.6% of

the complaints received were resolved in a timely manner – note that only 21.5% of the total grievances resolved represented Non-NUSAF activities.

As part of the IG grievance resolution mechanism or anti-corruption activities, 91 corruption related offences such as misappropriation, embezzlement, and misuse/diversion of funds were investigated to conclusion. The agency had recovered the sum of five hundred and six million, two hundred and eighty five thousand, five hundred shillings (UGX.506, 286,500) by the time of the evaluation; with the project resources recovered put back or reinvested in planned activities. Many testimonies from qualitative interviews and in the project progress report corroborate the evidence of recoveries by the inspectorate of government. A few examples are listed in spotlight 12.



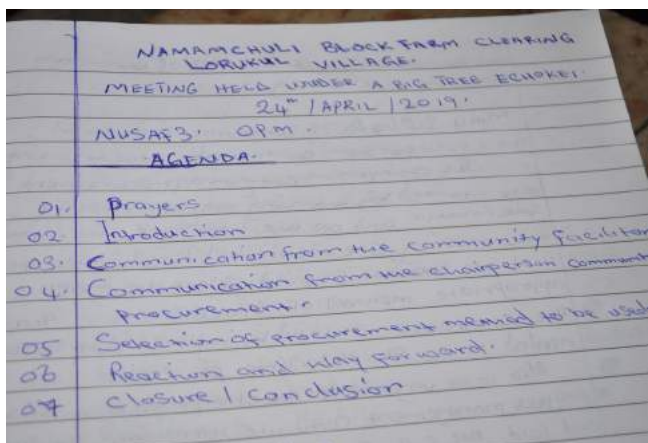
Spotlight 12: Testimonies of the active role of IG in NUSAF3 implementation

1. The case where a community facilitator diverted funds meant for the group for his own benefit and he was reported to the police and he was asked to refund back the money and he did it and he was interdicted from office (**FGD, Community Interest Group, Amuria**)
2. On a case where embezzlement of funds amounting UGX3,200,000, in consultation with the IG regional office, executive members were arrested by the NDO and detained at Amolartar Police Station. Eventually the entire sum was recovered and returned to group account (**IG, STAAC Quarter 1 report, November 2019**)
3. There has been some corruption cases that have been handled to completion within NUSAF 3 project for example there was a case that was taken to police where a chairperson of the groups in the community in Titi watershed sold off the ox plough and the bull without the consent of the group members and these members reported to the CMGs who reported to us (DIST). At first, the DIST failed to handle the case because the police in that area was not helping out, hence we referred the case to the police in Kiryandongo and the office of I.G who came in and looked for the chairperson and arrested him and put him in police cells. The group members came to police and negotiated with him until he bought back the ox plough and refunded some money for the bull. This case was in May 2019. We have also arrested a number of people who have sold the group animals in Nanda watershed (**FGD, District Implementation Support Team, Kiryandongo**)
4. Yes. There was a fish supply contract under Gulu University that did not go on as intended. It happened 2 years ago. There was usually insufficient delivery of fish and the money that was stolen by University Officials who failed to account for it. When complaints came up by beneficiaries, the NGO Forum reported the case to IG regional office in Arua and the District teams intervened whereby Gulu University had to pay back the money and that money given back to the community to accomplish other projects that had been inadequately funded. Besides the contract that Office of the Prime Minister (OPM) had signed with Gulu University was cancelled and awarded to another contractor (**KII, Civil Society Organization, Nebbi**)
5. Yes, there was a case where the CAO halted the project funds because she hadn't received any payments for herself hence, she refused to release the funds until she had gotten some pay. The office of I.G including the regional director and the team, the RDC, L.C 5 chairperson and RDP Uganda handled this case and the CAO was transferred to another district. This was between August and October 2020 (**KII, Civil Society Organization, Kiryandongo**)
6. There was also a case where the CFO was soliciting for money from CIGs in Nanda Watershed. The CFO was soliciting for around 200,000 from every group in order to get for them sign posts for their sub projects and transport for the sign posts. The CMGs reported to us and we reported to the office of I.G in Hoima, the CFO who was accused was called in to answer the charges and we also engaged the CAO and NDO and the CFO was made to refund some of the money that he had solicited from the CIGs. This was in 2018 (**KII, Civil Society Organization, Kiryandongo**)

While the evaluation team was not able to quantify estimates of the project resources that the component of the IG managed to save or prevented from being lost, key project stakeholders indicated that the involvement of the IG in the project was a deterrent from misusing, embezzling or diverting project resources for personal gain. One sentiment that re-echoed such views was expressed during a focus group discussion with a district implementation support team:

“There is very high level of vigilance by the communities where NUSAF3 projects have been implemented. The training given at the start of these projects by most of the stakeholders emphasized the issue of compliance to standards and accountability which are mainly under the docket of the IG. The presence of the IG has been an incentive in the success of NUSAF3 projects. It is a well thought approach to put the IG at the center of implementation of these projects” (FGD participant, District Implementation Support Team, Adjumani)

Enforcement measures such as interdicting prominent public service officials ensured that citizens were reminded of and alert to the IG ‘biting’ mandate. As one CMG member pointed out, that the fear of the IG meant that, “even when the community members interacted in the ordinary sense, there was a tendency for them to threaten their acquaintances with a call to the IG for just about any type of wrong doing”. Whereas some community members felt that IG enforcement actions were not severe enough, the examples documented were adequate to send out useful signals regarding punitive measures that the IG can take against corruption. For the IG and the other actors, it is important to note that the community needs to see that justice is administered fairly. For example, to simply move or transfer a CAO to another place of work, even after s/he was found to be corrupt reinforce the idea that duty bearers lack the seriousness required for combatting corruption. On the other hand, dealing with corrupt public officials with consistency and intensity would restore confidence and usher in the culture of transparency and accountability in service delivery in the long run. After all is said and done, to the extent that stakeholders such as the DIST were concerned, the centrality of the IG and the intervention that they provided was the key to the success of NUSAF3 implementation; and in a way supporting the position of the community in associating the increase in their household incomes, assets and resilience to the work of the IG.



Community project management structures met regularly and discussed important issues in their communities



NUSAF3 introduced New Crops in Northern Uganda, including Coffee Growing in Karamoja



Farmers of Maize in Bulisa Fetched low prices from maize prices because of a bumper harvest

Chapter Twelve //

Conclusions, innovations and recommendations



12.1 Conclusions

The NUSAF3 project development objective sought to create effective income support and build resilience of the poor. The impact evaluation has demonstrated that household resilience significantly improved among NUSAF3 beneficiaries. Resilience was significantly related to progress out of poverty as well as the welfare of households, both of which improved over the project life. The evaluation has also established that driving poverty out of the households of NUSAF3 beneficiaries requires building resilience. To achieve resilience, wealth and prosperity requires making interventions that improve household savings, food security and income. Both temporary work opportunities and livelihood investments impacted people's incomes which enhanced savings and expenditures on productive assets. This means that the project theory of change remained valid throughout the implementation process.

Inclusion of women and the unable-bodied in local public works makes big differences and builds capacity of the right persons. It is evident throughout the evaluation report that given opportunity, women can excel in business development, savings management and project leadership. And once empowered, women extend significant benefits to children and their families, often paying attention to their own needs last. Furthermore, the real meaning of social inclusion comes out when the unable-bodied such as the elderly, disabled, sick and lactating mothers are supported by livelihood programs.

Overall, while vulnerability and poverty still existed among beneficiary households, remarkable progress was made and the project development objective was achieved. This was possible because of a number of factors:

- a) **Appropriate targeting mechanism.** The targeting mechanism was quite innovative, participatory and transparent. The targeting mechanism allowed communities to select individuals deemed needy to participate in the project. Through the community meetings, the project gave freedom to the beneficiaries to select those considered poor in their communities. This mechanism was excellent, allowing people to argue, participate and agree on both who to

benefit and which project to implement in their community. The participatory approach empowered the communities to own the process and the project. The active poor approach (categorizing people into very poor, poor and rich) was reasonably good and effective as the exact beneficiaries were attained systematically. This mechanism empowered beneficiaries and the different local administrative units, thus affording NUSAF3 to have a strong inception. Such an inception softened the ground for implementers, improved cohesion among beneficiaries and as well reduced resistance from communities on account of what the project was supposed to do.

- b) **Creation of an effective design to deliver the desired interventions.** The LIPW focus on the poorest of the poor meant that the subcomponent was dealing with rural, unskilled and impoverished people. It was hard to engage these people in jobs that required skill yet they needed to earn. In part, the lack of skill accounted for unemployment and thus the poverty situation they were trapped in. Thus, the choice to engage them in labor intensive activities that required more strength than skill was a novel way of integrating the poorest Ugandans into the cash economy. Being the first of its kind, the model led to creation of community assets such as access roads, water dams, block gardens, and artificial forests while also supporting the beneficiaries to earn income. Furthermore, the livelihood income support mobilized people into productive entities, able to identify and exploit opportunities. In the process, the design of the project paved way for emergence of both community and individual entrepreneurship which had far reaching socio-economic consequences.
 - (i) The project provided training and thousands of people got new skills in a number of areas such as cage fishing, cattle fattening, contour ploughing, tree planting, soil management, new crop production (e.g., coffee farming among the Ik in Karamoja, matoke growing in

Karamoja, tea growing in Zombo), business management, community leadership, and use of new tools.

- (ii) The project helped to commercialize traditional farming practices of the poor and vulnerable people. Introduction of ox-ploughs expanded acreage of land tilled by households. Improved seeds or cassava stocks, fish feeds and other farm implements increased productivity and improved quality for commercial production. Therefore, cassava, maize, soybeans and other crops traditionally produced on small scale have been commercialized in the NUSAF3 project districts and evidence of large-scale commercial production was reported in a number of watersheds.
- (iii) The project mobilized and encouraged people to work in groups which built social capital, helping to bridge knowledge gaps in communities, and with suppliers, government officials and commercial institutions. These social bonds have allowed people to work together, learn from other members of CIG and change individual behaviours to follow group norms and rules. These social benefits will live long after the project.
- (iv) The NUSAF3 design provided impetus for mindset change towards household self-help initiatives and outlook to positive life changes of beneficiaries. There is hope and happiness among beneficiaries, many of them dreaming big and taking on challenges they would never have thought about before joining NUSAF3.
- (v) The organisation of beneficiaries into groups with specific guidelines and rules to follow was a novel idea which made the funds easy to

reach the groups and also helped members to learn from one another. The structures designed at the community, subcounty and district levels gave room for checks and balances. The linkage between OPM and NUSAF3 was vibrant.

- c) **NUSAF3 project framework addressed a perceived shortage of income opportunities and investment support** funds for the poor and vulnerable communities. The triangulation of bottom-up and top-down approaches facilitated community mobilization, community-project selection and approval as well as channeling funds to strategically minimize misuse and harness local opportunities. These project delivery approaches have made success in establishing profitable investments and enterprise development. They also facilitated adherence to principles of the program interventions and saving modalities. The bottom-up approach in particular had the benefit of promoting greater equity in the distribution of project benefits.
- d) **The project institutional arrangement used process-oriented approach focusing on building and strengthening working relationships and building partnerships with Local Government leadership and technocrats to reach a broad range of communities.** The arrangement provided an essential pathway to achieving goals and targets of NUSAF3 sub-projects in the fragile settings at household, and community levels in northern Uganda. NUSAF3 programming is seen to actively promote accountability and ownership, and ensure the involvement of all relevant stakeholders. This suggests that a cohesive group is greater than the sum of its parts.
- e) **Concentrating resources in one area is a good strategy** as it allows for their efficient and effective utilization. The watershed approach focuses resources to a handy scope and participatory approaches from bottom to top helps implementation due to community ownership exhibited.

Concentration also makes accountability system clear. Instalment funds released encourage stakeholders to account in order to receive next instalments.

f) STAAC made a significant contribution to NUSAF3

The activities implemented by the IG provided an important ingredient for optimal utilization of NUSAF3 project resources by NUSAF3 beneficiaries. In other words, the IG succeeded in preventing what would have been a financial hemorrhage and instead, facilitated the channeling of such project funds for the intended investment purposes. As a result of the massive sensitization and awareness raising activities, the community were not only informed about corruption but at the end, their patterns of behaviors and practices changed; many NUSAF3 beneficiaries were able to report malpractices, bribery, embezzlement and other grievances to the responsible authorities and community support structures. In that way, project resources were rescued and channeled back to the rightful owners and rightful purposes. Further, the IG through the monitoring and inspection were able to prevent financial losses. The IG ensured that there were no 'ghost' sub projects, in addition to executing deterrent measures. Learning from the project stakeholders, quite a number of project resource persons such as community facilitators were relieved off their assigned roles in NUSAF3. Even as the individual attitudes, behavior and practices were positively affected, the more important outcome was that such positive changes in individual behaviors conformed to important sub project management practices. A number of NUSAF3 beneficiaries strongly believed that the improvement that they had in terms of their household incomes, value of household assets, and household resilience was a result of the work that the IG undertook.

12.2 Innovation and Lessons Learned

NUSAF3 project design and implementation was anchored on a number of innovations that allowed for learning, knowledge transfer and delivery of tangible results to the project beneficiaries. The design strengthened community potential to mobilise, coordinate, organise and implement community-based interventions as well as market driven investments for socio-economic transformation. The following are some of the innovations identified by the evaluation team.

a) Disaster risk financing approach

DRF used a scientific approach to predict disaster and this worked out well for early warning and triggering of response to drought risks. DRF provided temporary employment to beneficiaries during the dry season in exchange for cash. The cash helped beneficiaries to buy basic necessities while creating community assets at the same time. This was a novel approach compared to the traditional approach of providing food relief. Government saved expenditure on relief food aid while at the same time community assets were created, livelihoods improved, savings went up and peoples' mindsets towards productive work were impacted. Above all, DRF empowered women as they took part in community leadership, earned income, started to make decisions in their homes and also acquired assets of their own. Nonetheless, during the project, other risk factors came up especially landslides, floods, and infestations at beginning of cropping seasons. These disasters and their associated risks were spread in different parts of Uganda. It is important that a DRF approach is taken to addressing these risks, thus calling for a more robust risk early warning mechanism and a proactive response, revolving around DRF.

b) Village Revolving Fund (VRF) / Sustainable Livelihoods Pilot (SLP)

The concept was not a grant but rather an investment fund accessed by Self Help Groups at village level through a loan system in a revolving manner. This was a capital reserve to support quick maturing businesses to grow over time, generally serving as a village bank in the targeted villages with minimal conditions for access. NUSAF3 invested UGX 15.9 Billion in the Village Revolving fund which triggered up to UGX 20 Billion in community

savings. The SLP/VRF has supported 410 VRFs in 31 districts benefiting 1,470 SHGs and 33,348 beneficiary households with 72% being females. Implemented as a pilot, the VRF turned around savings, investment and business growth where it was implemented. The Fund constituted a strong bottom up resource mobilization tool, giving the poor people access to capital at rates (below 5%) lower than commercial bank rates. The approach proved that with the same amount of money it is possible to reach more people and can avoid the dependence syndrome of grants. The VRF is complementary and the benefit of reaching more people has been proven. It stimulates entrepreneurship and women empowerment. The approach also revealed existence of strong human resources in the communities in the form of educated young people who can guide communities to greater positive impacts. Future programming needs to tap into this approach, perhaps tying it with the parish model which has been built with lessons and experiences from NUSAF3.

c) Community savings and LIPW were novel components of NUSAF3

Besides the Savings under VRF, the savings groups were helpful in creating cohesiveness, social capital and togetherness in communities. There was novelty in the use of IHISP and LIPW to provide people with income. The deliverable focus on the poorest of the poor and the active poor, and giving them opportunities to earn income, save and invest was the first of its kind in Uganda. In particular the LIPW model was novel in encouraging hard work, learning of new skills, formation of groups and learning how to save. The LIPW principle was a greater innovation that brought people to work together, while its components like tree planting restored the environment and improved community livelihoods. Allowing of LIPW groups meeting the CIG savings thresholds to upgrade into livelihood groups was progressive and supported emergency of consistent, focused and committed community entrepreneurs.

d) The Settlement-based development initiative

Settlement based development initiative in Karamoja delivered significant impacts. Stemming from NUSAF2, this initiative demonstrated that it is possible to improve livelihoods and achieve

socio-economic prosperity for poor households. The initiative started with political leaders receiving practical training in the initiative to create initial buy-in and support. There is strength in communities to adapt modern ways and integrate them into their traditional ways to create welfare. There is need for more research on how this socio-economic system can work to suit other areas beyond Karamoja. The research should further inquire as to whether traditional generic programming is the way to go or interventions should be specific to the peculiar characteristics of a given community - rural urban variations, climate, land ownership, topography among others.

e) Strong partnerships with the private sector

By nature, a project operates within a specific timeframe and budget to achieve specific objectives. This means that it can be difficult to design and deliver a project successfully without partnerships with the private sector. This is particularly important because reliance on public servants faces the challenge of a work culture that can frustrate project implementation. NUSAF3 has demonstrated that government-private sector partnerships improve efficiency, effectiveness and offer room for making sustainable interventions. The project supported local governments by bringing in additional expertise from private sector to back up public servants. As a result, trainings, supply of seedlings, and introduction of market information was key in driving the project. In particular, cage fish farming, diary farming, and seeds worked well because of this model. Future programming may consider strengthening such partnerships, bring on board other private partners such as financial institutions, manufactures, and telecom companies among others.

f) Partnership with Research Institutions

NUSAF3 built a strong partnership with Makerere University and Makerere University Business School. The partnership was premised on the fact these training institutions possessed strong research expertise, and their involvement in development work would generate knowledge for advancement of scholarship and policy in Uganda. It would also expose both the academic staff and students to new knowledge for causing national development. Furthermore, being government institutions, the

parties in the partnership benefitted from efficiency gains associated with continuity with the research activities. It is important that such partnerships are strengthened in future programming as they deliver more benefits than the traditional private consultancies for important functions of research.

g) Modern ICTs

Operations in NUSAF1 and NUSAF2 were manual, relying on a lot of paperwork. In Gulu there was a full container of papers of documents submitted by communities. However, the workflow of NUSAF3 was digital and all submissions were electronic. This has saved volumes of paperwork and a lot of money saved on delivery of physical documents (fuel, allowances, wear and tear and wear of cars, printing equipment, etc). In monetary terms, this saving was in billions of shillings. The best was the time savings. The purpose-built MIS was an innovation, used by 67 districts, IG, OPM, etc at the same time. All of these stakeholders could log in any time to do their work and the system served them all. The biometric payment system was the first of its kind in Uganda and MIS today is among the 3 top most systems in Uganda for government projects. However, because of covid, future programming could explore new technologies that may not require physical touching. The electronic way of managing data is the way to go, including use of social media to share information with stakeholders.

h) Learning in the communities

Learning was a deliberate effort contributing to increased food production, participation in business activities, reduced gender-based violence, increased savings and social harmony in communities. Learning was done through deliberate measures in which beneficiaries received on-job training, participated in demonstrations, study trips, and attended workshops and seminars. Other learning was through Radio talk shows, back stopping to groups in financial management and translation of guidelines into local languages. The knowledge that groups acquired was passed down to family members, friends and to the members of the community. Overall, there was a lot of formal and informal learning thus improving human capital of NUSAF3 beneficiaries.

i) Community participation and inclusiveness

The use of the communities themselves to identify their problems and the possible solutions to the problems identified was innovative. The community based participatory approach encouraged communities to think of solutions to their problems which increased project ownership. Consequently, communities were empowered to make decisions, make budgets and implement them with minimal supervision. This ensured sustainability, trust and reduced corruption. Use of local artisans narrowed the gap between the technical team at the district, sub county level and project sites.

Social inclusiveness made NUSAF3 people-centred striving for just, equitable and inclusive interventions. The commitment to promote sustained and inclusive livelihood means, social development and environmental protection will in the end benefit all people, and this is quite innovative on the part of the project. The bottom-up approach ensured that enterprises were community demand driven – they implemented what they thought would benefit them. Participatory approaches made beneficiaries own the project.

j) Community entrepreneurship development

NUSAF3 fostered community entrepreneurship through livelihood income support which spurred enterprise development and strengthened beneficiary livelihoods. Communities were trained in enterprise development and they were further supported with finances to start income generating enterprises. A number of LIPW beneficiaries also earned money which they re-invested in enterprises to sustain their families. Savings have been a great part of NUSAF3, helping groups and individuals to borrow, invest and repay. Overall, identification and exploitation of business opportunities increased, with several beneficiaries suffering losses on first attempt but persisting and eventually succeeding. NUSAF3 played a key role in awakening the entrepreneurial spirits of the poor people of northern Uganda.

k) Integrated longterm planning

NUSAF has so far implemented three phases, with significant disjoints between the phases. These phases do not follow an integrated development plan that is longterm. This is especially important when issues of community resilience, poverty reduction and environmental management are put into consideration. In other countries such as China and Ethiopia where the watershed approach has been implemented successfully, there have been longterm integrated plans to which the medium term projects contribute. In these longterm plans, strong collaborations are built with key stakeholders and there is a strong research component to guide specific interventions and approaches.

l) There were a number of lessons learnt from STAAC component:

- (i) Packaging information and communication materials is vital to changing mind set change i.e. changing attitudes and ultimately practices towards whistleblowing or involvement in demanding for transparency and accountability. TAAC project implementers revealed during interviews that once the message sank-in that NUSAF3 was not a “government project” but rather “our” project, participants were more willing to engage in project activities; protect project resources; demand for accountability, and; report non-compliance or corrupt group members, service providers or other project implementers.
- (ii) Transparency, Accountability and Anti-corruption should start at design, and continues throughout the project life cycle in order to be effective. The reason STAAC was hugely successful might as well be attributed to the overall design of NUSAF3, where the decision making responsibility for project management including in the use of project

resources were largely the beneficiaries’. While there were cases where some project beneficiaries attempted to steal what belonged to the group, such errand members were immediately held accountable. By assigning the project management responsibilities and decision making to the beneficiaries and not the implementers, NUSAF3 limited opportunities for corrupt public officials to exploit from the project. It was also easy for the IG to enforce compliance with transparency, participation, accountability and anti-corruption because the project had clear implementation guidelines.

- (iii) The adage ‘information is power’ should not be underestimated in a citizen engagement and accountability intervention. It is important to provide information timely, widely, consistently and frequently. The only prosecutable offence that the project registered over almost six years of implementation exploited the beneficiary lack of information. In this single case, a public official was able to obtain by false presence, project funds before project participants were trained. This may not have been possible had he tried to extort money after the training, because group members would have been able to demand for an explanation, or report of their suspicions.
- (iv) Within the context of projects, a grievance resolution delayed, is justice denied. Project related complaints do not have the luxury of time. Take for instance seasonal changes happen within the span of 3 months or less, and this affects weather-dependent enterprises such as crop production and SERNM. Fortunately, the IG as STAAC component implementers realised at the beginning of the intervention that enforcement activities (investigations and prosecutions) that usually took at least six months to conclude was not the way to go. Using other alternative mechanisms of redress enabled the IG to recover project resources that might have been lost had the agency tried the long enforcement route.

12.3 Recommendations

12.3.1 Sustainability of project outcomes

Household strategies

Households should continue to implement what they have learnt for example post harvest handling and value addition, hygiene and sanitation practices like using soap and water for washing hands after visiting the toilet, storage of food in granaries among others. They will also teach their children and relatives to apply the same knowledge for the betterment of their lives. They should also continue to belong to savings groups under NUSAF and even join other groups so that they are able to accumulate savings for the future. Perhaps, the savings groups should be linked to formal financial institutions for technical support and further exposure to the financial sector. It is envisaged that households will continue engaging in those activities where they are rewarded and this is where sustainability will be achieved at household level.

Community strategies

Community assets should be maintained by the communities together with the local council committees and the subcounty administration. The community stores and market stalls should for example be maintained by the village committees. Community leaders should continue sensitising and guiding the community on the good social values to avoid instances of gender-based violence. They should also set up sub committees at watershed level to deal with cases of gender-based violence in case they arise. The community leaders should continue to create awareness about the importance of saving as well as the need for beneficiaries to start income generating activities to help them have a continuous flow of income.

Local government strategies

NUSAF3 projects should be aligned with the local government structures and assigned to responsible line departments in the local governments to supervise and manage them. Extension workers should continue to support the groups and beneficiaries especially through providing advice and guidance when the need arises. Extension staff and CDOS need to be assigned at every local government to NUSAF3 sub projects for closer Monitoring and Evaluation. The District officials committed to continue with their roles of supervision and implementation of the NUSAF3

projects that are already in place. For example, the District Production Office will supervise production, the commercial officer will continue to advise and to look out for markets for their produce and the environment officer will advise on matters of the environment.

Central government level strategies

Government should build the capacity of sector heads to continue with mentorship. There is need to enhance monitoring and documentation of achievements through provision of Monitoring and Evaluation fees to the implementation structures so that they continue to implement the project activities. Government should consider allocating additional funds to the districts to take on the community access roads and market stalls for better management and sustenance. Government should further sensitize the beneficiaries on the importance of maintaining the projects so that they don't abandon them. Sensitisation about the ownership and maintenance of the various projects put in place by NUSAF like roads, markets and valley dams should be ongoing.

There is need for a water harvesting project to ease household and commercial farming activities through interventions like irrigation. With such interventions, farmers can continue to grow vegetables even in the dry seasons hence availing food for their families all through the year. Valley dams and protected spring wells should also be constructed to help ease the water burden on the communities.

Government should make sure that there is involvement of elected leaders to align programs to manifestos. All elected leaders should be inducted on the project to avoid politicization and interference of the government projects by politicians.

12.3.2 Policy Recommendations

Continue with the public works approach to address vulnerability

The use of the labour-intensive public works is a useful approach to addressing vulnerability and poverty among the poorest of the poor people of Uganda. This approach should be continued because it targets the most vulnerable people who have no skills or minimum requirements (including the right attitude) to qualify for or even sustain a number of Government interventions. LIPW engages them productively, they earn income, build

community assets that benefit whole communities, changes their attitude towards work and teaches them a skill. The approach is community-driven and thus instils a sense of ownership of the interventions. With the incomes earned, the vulnerable people are able to smoothen consumption, make savings and investments, buy assets and are able to join the cash economy.

Scale up the Village Revolving Fund (VRF) and IHISP

The VRF pilot proved that it is possible to spur local economic development through savings and investment with a modest initial outlay. The pilot started with UGX8billion which quickly multiplied to UGX20billion. The model allows the active poor to organise into groups, set rules, manage their funds and do what financial institutions would do but at a local less stringent level. The model allows rural people to borrow money, invest and pay back. It integrates them into the financial economy and they thus contribute towards improving livelihoods and poverty reduction.

Scale up Disaster Risk Financing (DRF)

Government needs to scale up disaster risk financing as NUSAF3 has demonstrated that the approach allows early detection of, and timely response to disasters. The model was successfully piloted in Karamoja and it should be scaled up to the whole country. It should also be strengthened to cover other disasters. Evidence has shown that DRF smoothen consumption and protects livelihoods from worsening as a result of disasters. Since DRF began in Karamoja, food relief to the region has reduced, food production has increased and disaster related risks such as death of livestock and humans have significantly reduced.

Strengthen implementation of the Watershed approach

Use of the watershed approach has demonstrated that it is possible for communities to restore, protect and conserve natural resources while at the same time improving their livelihoods. The several subprojects in soil conservation, forestry, environment and desilting are expected to go a long way in cleaning the air, improve the local ecosystems, and reverse climate change effects. The model that has been used brings together

whole communities to respond to both livelihood and environmental challenges. This model should be strengthened as it lies at the heart of addressing the root causes of both human and nature induced shocks. In part, the watershed management committees should be funded and strengthened to support in sustaining of interventions in the watersheds.

Implementation for Results

Integrate results based management at all project levels to plan and implement for results. Train all project stakeholders/ implementers in results based management to enable a shift from outputs to outcomes. It will be vital to guide beneficiaries to have socio-economic action plans to guide their household and community development. These plans should then guide their investments when they earn incomes from project interventions. Groups should not only meet to save money but should discuss a range of developmental ideas, issues affecting households and community such as GBV, environment, etc. Adult literacy should be introduced in these groups, and this can be archived using locally available resources. At the core, both LIS principles and the ten indicators of PPI should be integrated in the results framework.

Take a value chain approach when supporting enterprise development

A value chain approach to business-oriented interventions can deliver better results. For every business idea raised by beneficiaries, a value chain analysis should be done and gaps identified. The project should focus of closing these gaps for specific enterprises (or a critical mass of enterprises in a given watershed). NUSAF3 has helped to boost production but value addition, and unblocking key obstacles in the environment of business was not done. In the future, a holistic approach to enterprise development should be adopted for sustainable enterprise growth.

Integrate and strengthen TAAC in future programming

- i. A critical challenge to this evaluation was the lack of a baseline data. The bigger challenge for the component however was the low level of utilization of the components' monitoring and evaluation system. While the M&E officer developed an M&E system complete with tools and

reporting templates/guidelines for various activities, evidence of utilization was weak. Take for example, while the evaluation team was able to access and verify the use of the periodic reporting templates by the Project Officers, the template for monitoring and inspection of projects were not utilized. The component's M&E should be strengthened by allocating resources for regular training of staff e.g. in documentation and utilization of M&E findings. The IG should take deliberate efforts to measure and track changes scientifically by budgeting for a baseline study, mid-term review and end of component evaluation.

- ii. It is important for the IG to clearly document and articulate the difference and value addition that it brings to monitoring. Even so, it would serve all interests if the different stakeholders in the project can jointly plan monitoring and inspections of projects to avoid overlaps, duplication, and fatigue of the project implementers and beneficiaries who have to devote time for this activity. The IG for example should consider focusing on hold grievance resolution meetings/or other similar intervention during the agency's visits.
- iii. For the confidence of the public to be restored in the IG grievance redress system (and the agency as a whole), it is important that all culprits are seen to be treated equally

and that justice is administered fairly. In addition, the feedback mechanism for such investigation should be improved. The community need to be given information of what has happened to the cases received. A radio programme to provide general feedback (non-confidential information) on cases under investigation, or procedures that the IG follow after receiving a case for investigation may suffice.

- iv. Given that the ultimate objective of STAAC project interventions is to identify and resolve grievance, the need to strengthen follow up of action plans for grievance redress is key. While the IG was able to register numerous complaints through the community score card, monitoring and inspections, or from whistleblowers, records of the implementation of action plans to unresolved grievances were scanty. It is important that the agency clearly develops a mechanism/strategy that will enable it follow up support of agreed action plans, ensure that they are effectively and efficiently executed, and properly documented. Exploring the development of an IG-hosted electronic database, or the use of the STAAC component MIS interface would aid follow up. The database could activate a tracking, sorting and referral interface that would flag high risks sub projects, and/or urgent/critical actions to the attention of different stakeholders for redress.

Table 44: Appendix 1: Lookup Table for Progress out of poverty computation

PPI Score	\$1.25/day 2005 PPP	\$2.00/day 2005 PPP	\$2.50/day 2005 PPP	\$4.00/day 2005 PPP	\$5.00/day 2005 PPP	\$8.44/day 2005 PPP
0 - 4	96.7	99.4	99.7	100.0	100.0	100.0
5 - 9	92.1	98.4	99.5	100.0	100.0	100.0
10 - 14	76.0	94.2	98.3	99.8	100.0	100.0
15 - 19	65.3	91.5	95.0	99.5	100.0	100.0
20 - 24	58.4	90.4	95.0	99.0	99.9	100.0
25 - 29	45.3	82.2	92.9	98.8	99.6	100.0
30 - 34	27.9	66.9	82.6	95.4	99.0	99.8
35 - 39	23.9	60.5	77.2	93.1	97.2	99.4
40 - 44	20.1	56.6	71.5	91.6	95.0	99.1
45 - 49	10.9	45.7	60.0	81.4	89.2	98.8
50 - 54	4.9	29.3	45.3	75.0	85.7	96.1
55 - 59	3.1	19.5	34.2	65.1	73.9	91.8
60 - 64	0.3	11.1	21.6	57.4	69.1	90.3
65 - 69	0.0	3.0	10.5	37.7	59.1	86.3
70 - 74	0.0	0.8	4.9	27.9	40.9	72.3
75 - 79	0.0	0.0	2.7	17.9	31.3	69.5
80 - 84	0.0	0.0	2.6	8.9	27.9	52.8
85 - 89	0.0	0.0	0.0	3.5	12.3	41.3
90 - 94	0.0	0.0	0.0	0.0	0.0	36.3
95 - 100	0.0	0.0	0.0	0.0	0.0	36.3

This PPI was created in June 2015 using Uganda's 2012/13 National Household Survey by Mark Schreiner of Microfinance Risk Management, L.L.C. For more information, please visit www.povertyindex.org.



ENDLINE IMPACT EVALUATION REPORT

JUNE 2021